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of Basic Education

These workbooks have been developed for the children of South Africa under the leadership of the Minister of Basic Education, Mrs Angie Motshekga, and the Deputy Minister of Basic Education, Mr Enver Surty.

The Rainbow Workbooks form part of the Department of Basic Education's range of interventions aimed at improving the performance of South African learners in the first six grades. As one of the priorities of the Government's Plan of Action, this project has been made possible by the generous funding of the National Treasury. This has enabled the Department to make these workbooks, in all the official languages, available at no cost.

We hope that teachers will find these workbooks useful in their everyday teaching and in ensuring that their learners cover the curriculum. We have taken care to guide the teacher through each of the activities by the inclusion of icons that indicate what it is that the learner should do.

We sincerely hope that children will enjoy working through the book as they grow and learn, and that you, the teacher, will share their pleasure.

We wish you and your learners every success in using these workbooks.

Rainbow WORKBOOKS

MATHEMATICS IN ENGLISH
GRADE 5 – BOOK 1
TERMS 1 & 2
ISBN 978-1-4315-0026-0

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MATHEMATICS IN ENGLISH – Grade 5 Book 1

ISBN 978-1-4315-0026-0



MATHEMATICS IN ENGLISH

Grade 5

Book 1

Terms 1 & 2

Name:

Class:

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA



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2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100



Grade 5

Rainbow WORKBOOKS

Mathematics in ENGLISH

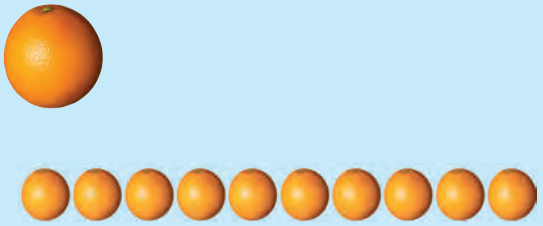
ENGLISH Book 1

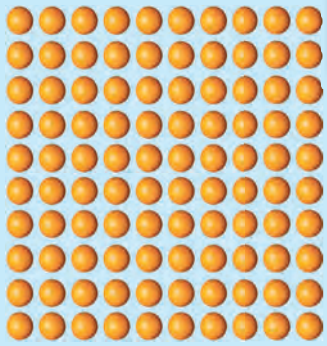
Name:



1 Base Ten Counting

How many oranges are there?
See how fast can you count them.

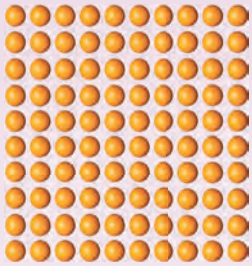


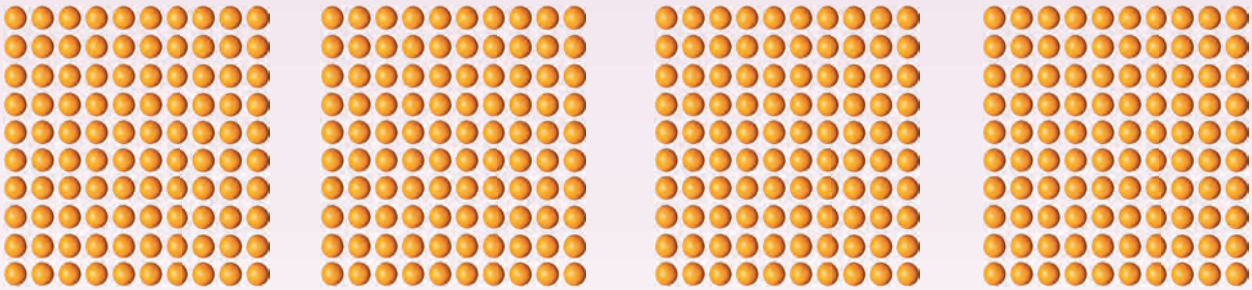




1. Count the oranges.

a. 

b. 

c. 

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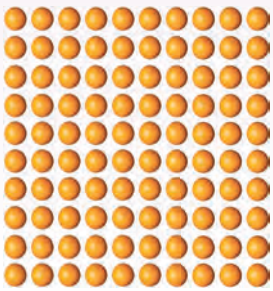

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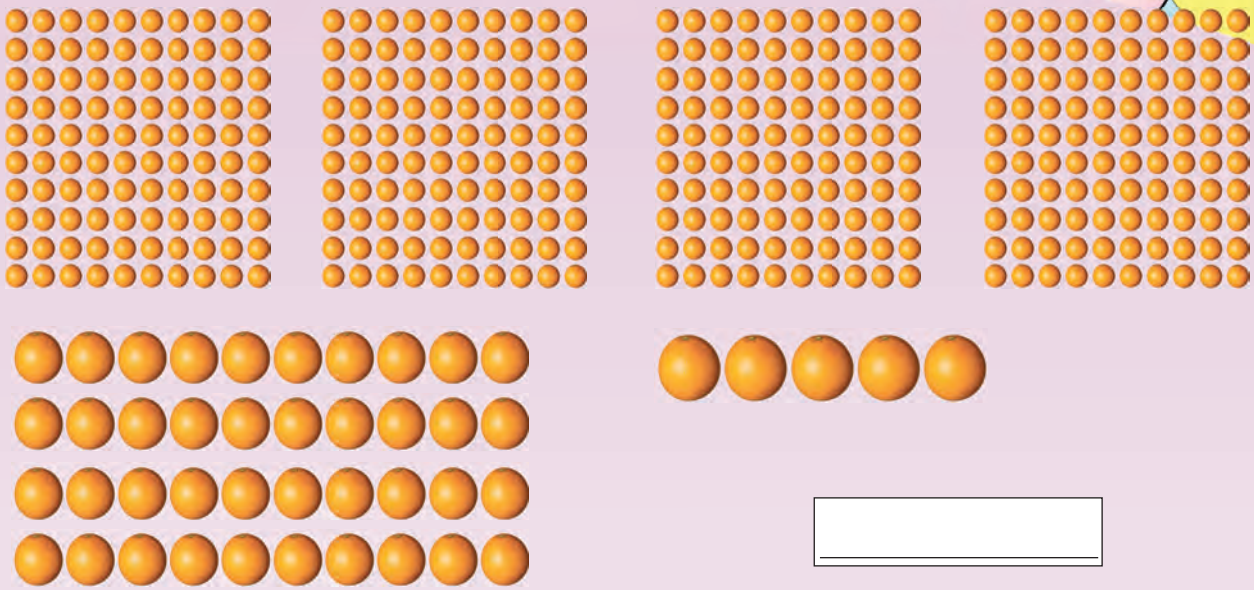

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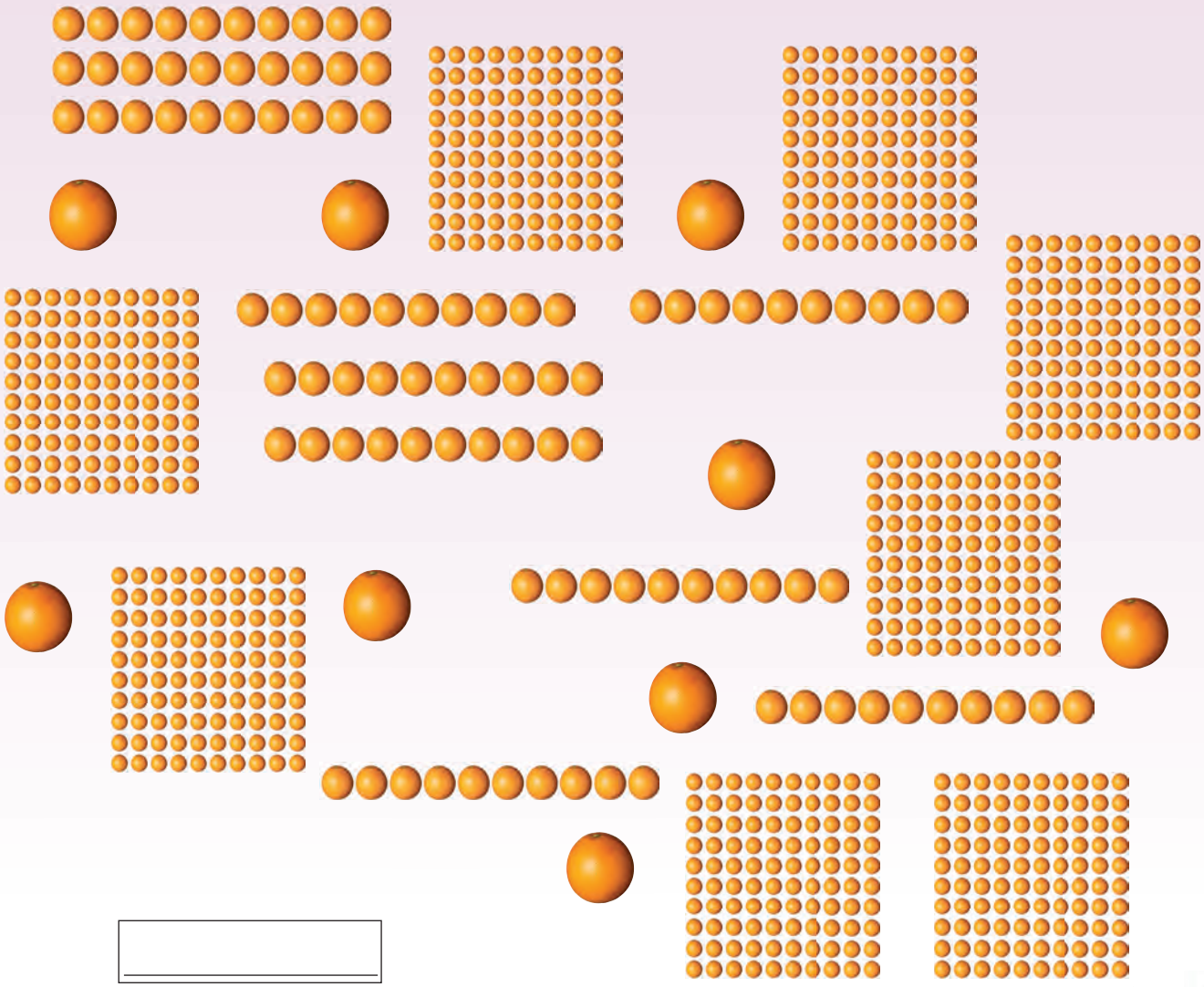

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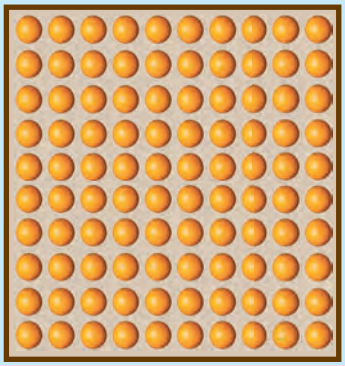
Base Ten Counting continued

How many oranges are there?





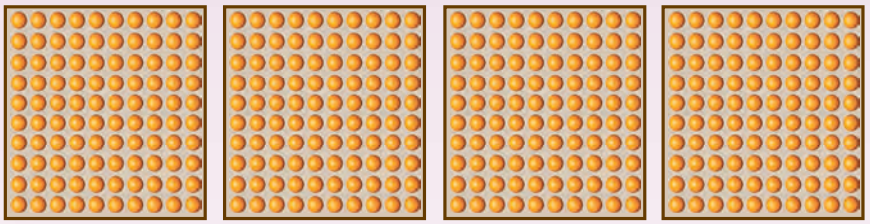


2. Count the total of all these oranges. The bags and boxes have the same number of oranges as above.

a.







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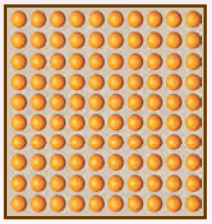
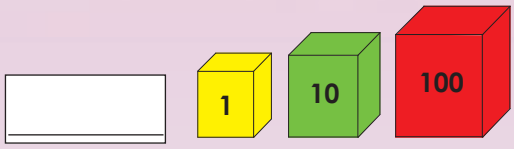


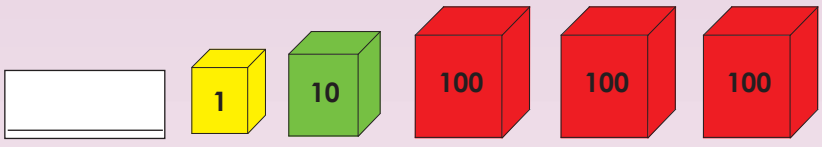


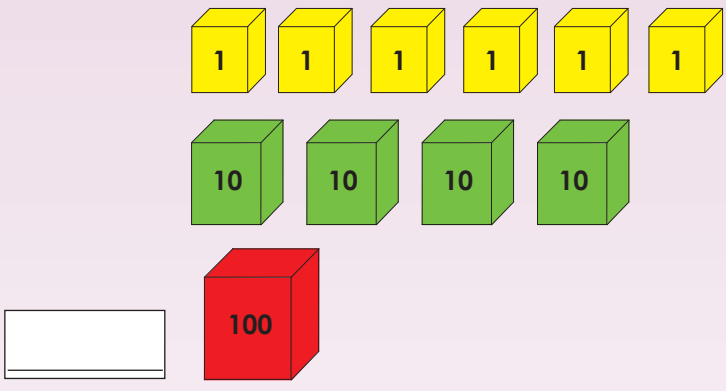




3. **Each box shows the total number of objects inside each box. Write down the total number of objects.**

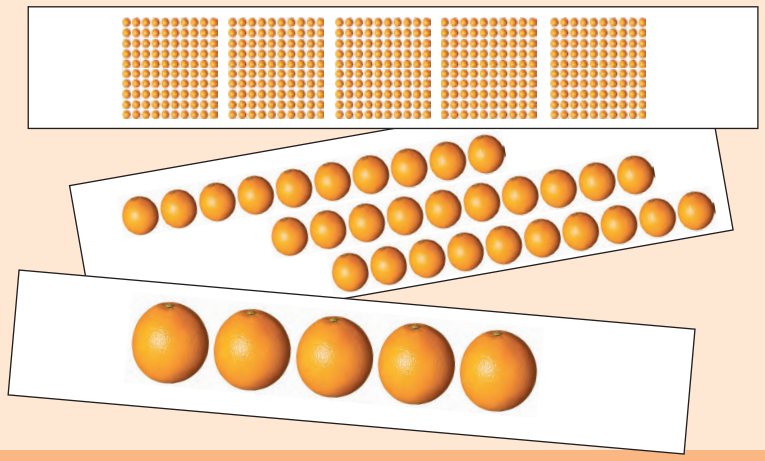
a. 

b. 

c 

How quick are you?

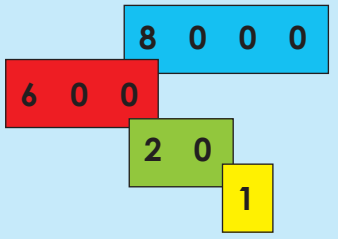
What you need:
Cut-out 1.

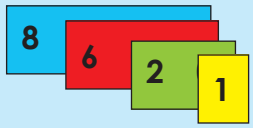


What to do:
- Play in pairs.
- Cut-out the cards from the back of your book.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- Turn them over at the same time.
- See who can give the total the quickest.
- Check your partner's answer.
- Do the same using 6, then 7, 8, 9 and 10 cards.
- The person with the most correct answers is the winner.

2 Numbers 0 – 10 000

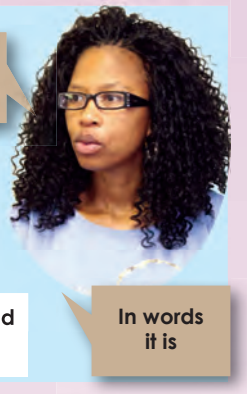
What number will these cards make?





8 621

Eight thousand six hundred and twenty-one



1. Complete the following:

a. 3 0 0 + 4 0 = _____

b. 7 0 0 + 8 = _____

c. 3 0 0 0 + 1 0 0 + 4 0 = _____

d. 9 0 0 0 + 6 0 + 7 = _____

e. 6 0 0 0 + 9 = _____



2. Write the number in the correct column:

		Thousands	Hundreds	Tens	Units
a.	387		3	8	7
b.	704				
c.	4 205				
d.	8 390				
e.	4 100				

3. Complete the following.

- 723 = 7 hundreds + 2 tens + 3 units

- 678 = _____

- 5 021 = _____

- 7 804 = _____

- 6 300 = _____

continued ☛

Numbers 0 – 10 000 continued

4. Look at the first example (a).
Now write the other numbers in expanded notation.

a. 654 = 600 + 50 + 4

b. 203 = _____

c. 2 015 = _____

d. 8 002 = _____

e. 7 605 = _____

5. Write the following in words.

a. 50 _____

b. 300 _____

c. 8 000 _____

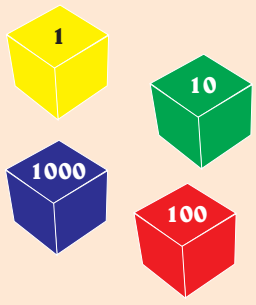
d. 730 _____

e. 9 200 _____

f. 4 729 _____

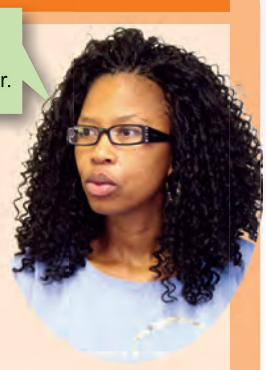
What is the size of your number?

What you need:
- Cut-out 3.



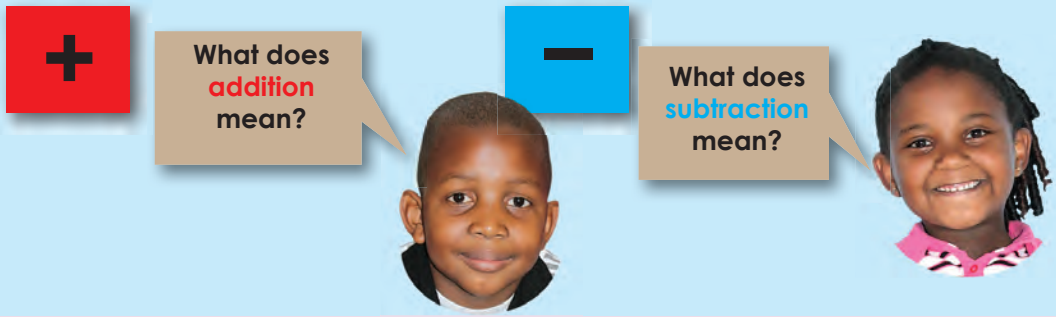
What to do:

- Play in pairs.
- Each player rolls the thousands (blue), hundreds (red), tens (green) and units (yellow) dice.
- Each player then makes this four digit number with his or her own number cards.
- The winner is the player with the greatest number.
- Do the same activity five times.



Addition and Subtraction to 9 999

What do addition and subtraction mean?



1. Complete the pattern:

a. + 100 + 100 + 100

200	300	400			

b. – 200 – 200 – 200

2 000	1 800	1600			

c. + 500 + 500 + 500

500	1 000	1 500			

d. + 300 + 300 + 300

600	900	1 200			

e. – 400 – 400 – 400

5 000	4 600	4 200			

2. Complete the pattern:

a. 200, 400, 600, _____

b. 400, 800, 1 200, _____

c. 1 000, 1 500, 2 000, _____

d. 9 000, 8 000, 7 000, _____

e. 7 700, 7 600, 7 500, _____

3. Complete the table by filling in the missing numbers.

		Complete to the next 10	Complete to the next 100
a.	48	48 + 2 = 50	48 + ____ = 100
b.	164	164 + ____ = 170	164 + ____ = 200
c.	549	549 + ____ = 550	549 + ____ = 600
d.	176	176 + ____ = 180	176 + ____ = 200
e.	398	398 + ____ = 400	398 + ____ = 400

continued ☛

Addition and Subtraction to 9 999

continued

Examples:

Example 1:

5 783 + 129

= 5 000 + 700 + 80 + 3 + 100 + 20 + 9

= 5 000 + 800 + 100 + 12

= 5 000 + 900 + 10 + 2

= 5 912

Example 2:

	3	2	4	7	
+		7	3	8	
			1	5	(8 + 7)
			7	0	(40 + 30)
		9	0	0	(200 + 700)
+	3	0	0	0	(3 000)
	3	9	8	5	

4. Use both methods above to calculate the following. Write down the steps you use.

a. 654 + 43 =

b. 572 + 317 =

c. 1 671 + 327 =

Continue on an extra sheet of paper.

d. 2 164 + 42 =

e. 4 256 + 2 487 =

f. 2 194 + 3 642 =

Continue on an extra sheet of paper.

Examples:

Example 1:

8 342 – 2 131

= (8 000 – 2 000) + (300 – 100) + (40 – 30) + (2 – 1)

= 6 000 + 200 + 10 + 1

= 6 211

Example 2:

	8	3	4	2	
–	2	1	3	1	
				1	(2 – 1)
			1	0	(40 – 30)
		2	0	0	(300 – 100)
–	6	0	0	0	(8 000 – 2 000)
	6	2	1	1	

5. Choose one of the methods above to calculate the following. Write down the steps you use.

a. 7 182 – 61 =

b. 7 546 – 431 =

c. 8 764 – 3 451 =

Continue on an extra sheet of paper.

d. 2 456 – 83 =

e. 4 658 – 999 =

f. 8 759 – 4 793 =

Continue on an extra sheet of paper.

+

What is the size of your number:

What you need:

- Use the 10s, 100s and 1 000s dice made in the previous activity.
- Piece of paper.



What to do:

- Roll the tens (green) dice.
- Add the number landed on, to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the next four numbers.
- Repeat the activity with the 100s and 1 000s dice.
- Learners check each others' additon sums.
- The winner is the person with the most correct answers.

1 132
1 423
1 400
1 675
1 897

–

Repeat the activity using subtraction.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

4 Multiples and Multiplication

What do multiples and multiplication mean? Use the words to help you to describe them.

X



- multiply
- groups of
- product
- times
- multiplied by

Multiples example:

- Some multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, 18, …
- Some multiples of 4 are 4, 8, 12, 16, 20, 24, 28, 32, …

1. Complete the number board. We have done a few for you.

a. Colour all the multiples of 2 yellow.

b. Circle all the multiples of 3.

c. Make a triangle around the multiples of 4.

X	1	2	3	4	5	6	7	8	9
1		2	3						
2	2	4	6						
3		6		12					
4				16					
5									
6									
7									
8									
9				36					

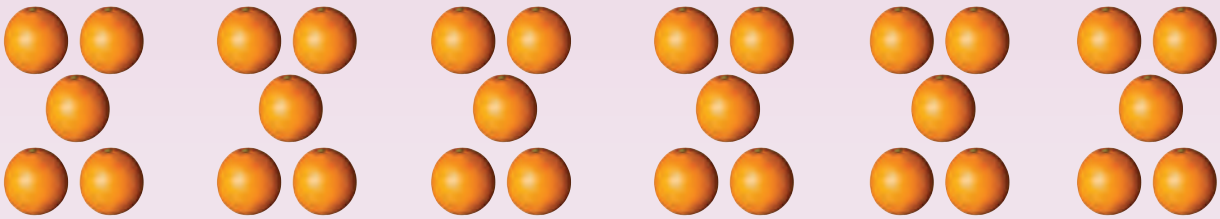


2. **Write a multiplication sum for the following:**

a.



b.



c.



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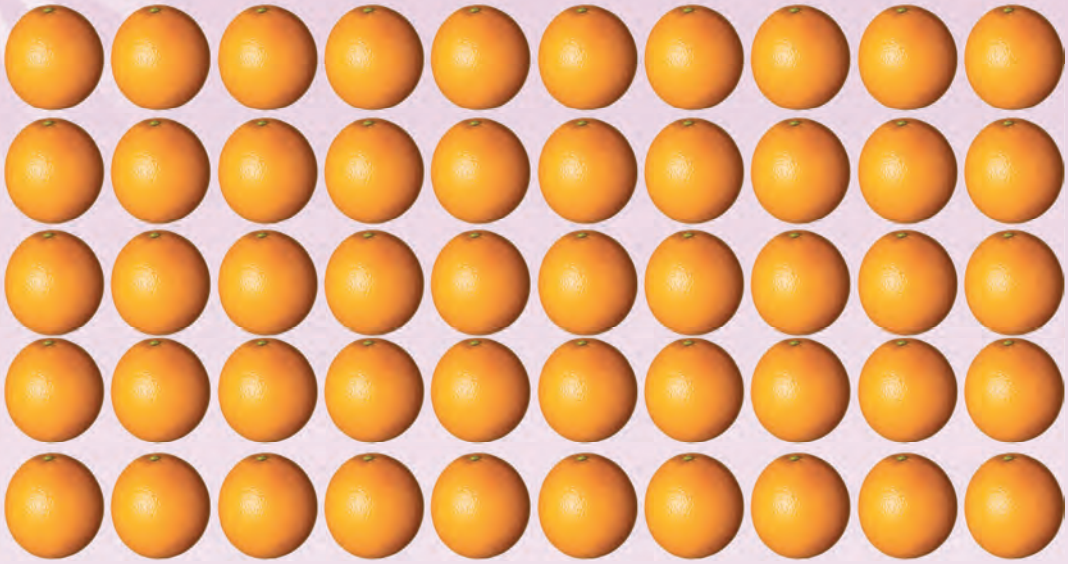
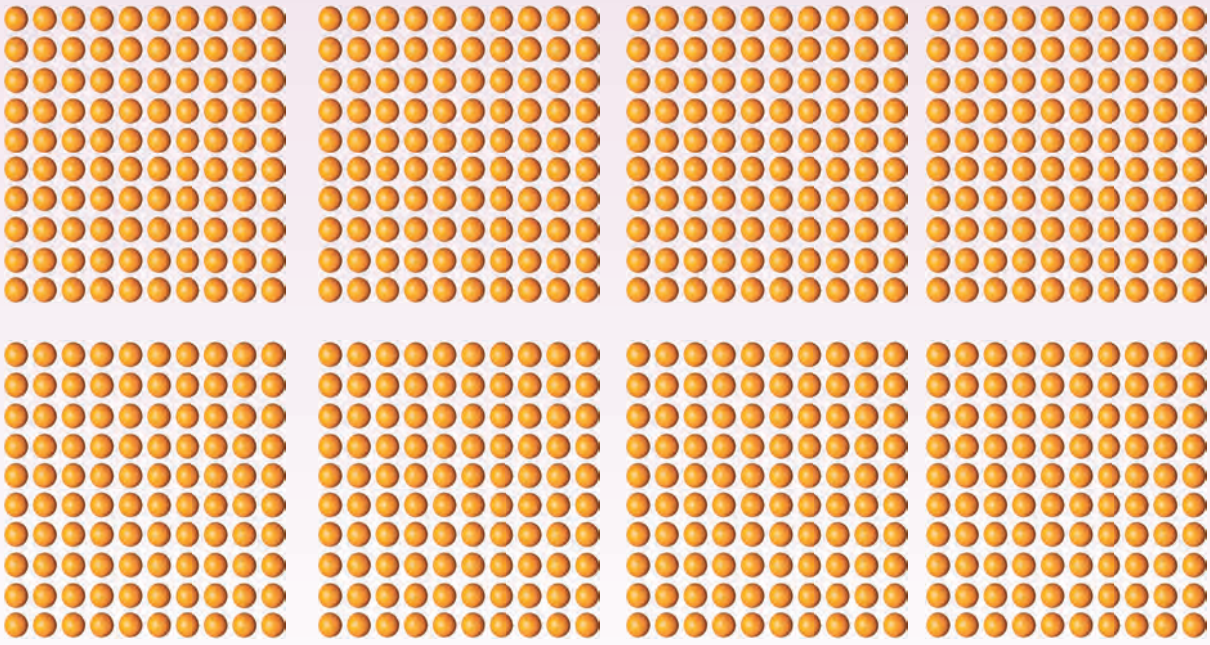
Multiples and multiplication continued

d.



e.



Examples:

Example 1:

56 x 5

= (50 + 6) x 5

= (50 x 5) + (6 x 5)

= 250 + 30

= 280

Example 2:

		5	6	
x			5	
		3	0	(6 x 5)
	2	5	0	(50 x 5)
	2	8	0	

3. Use both methods above to calculate the following. Write down the steps you use.

a. 24 x 3 =

b. 52 x 9 =

Continue on an extra sheet of paper.

c. 23 x 21 =

d. 46 x 37 =

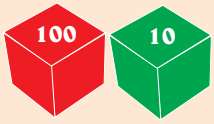
Continue on an extra sheet of paper.

X

In one minute I can ...

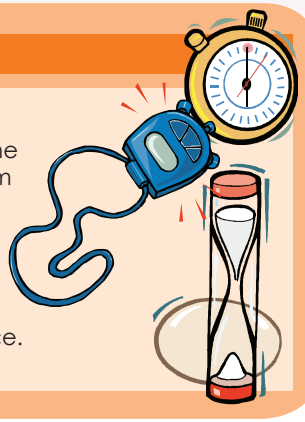
What you need:

- Use the 10s and 100s dice made in the previous activity.
- Piece of paper.



What to do:

- Roll a 10s dice and then a 100s dice. Multiply the two numbers. Write down the multiplication sum with the answer.
- Repeat doing this until your teacher says stop.
- Give your sums to your partner to mark.
- The winner is the person with the most correct multiplication sums.
- Do the same activity, but roll the 100s dice twice.



15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

5 Division and Factors

What does division mean? Use the words to help you to describe it.

÷



divide
remainder
divided by
share

1. Look at the colouredsquares. Write a division sum for each.

X	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	36	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

a. 24 ÷ 6 = 4 or 24 ÷ 4 = 6

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

i. _____

j. _____

2. Complete the spider diagrams:

a.

35	5
42	6
14	2
56	8
63	9

b.

25	5
15	3
50	10
45	9
35	7

c.

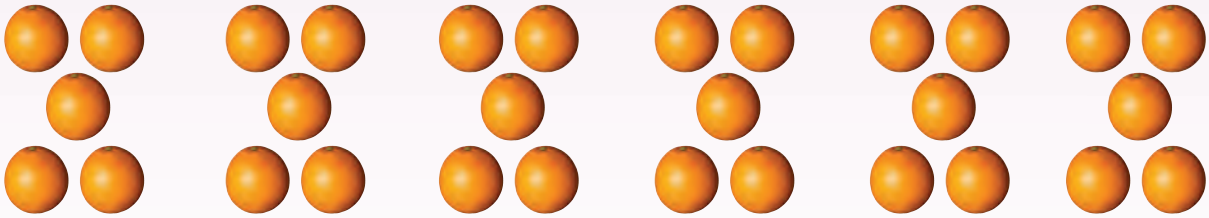
42	7
6	1
54	9
30	5
36	6

3. Write a division sum for the following

a.



b.



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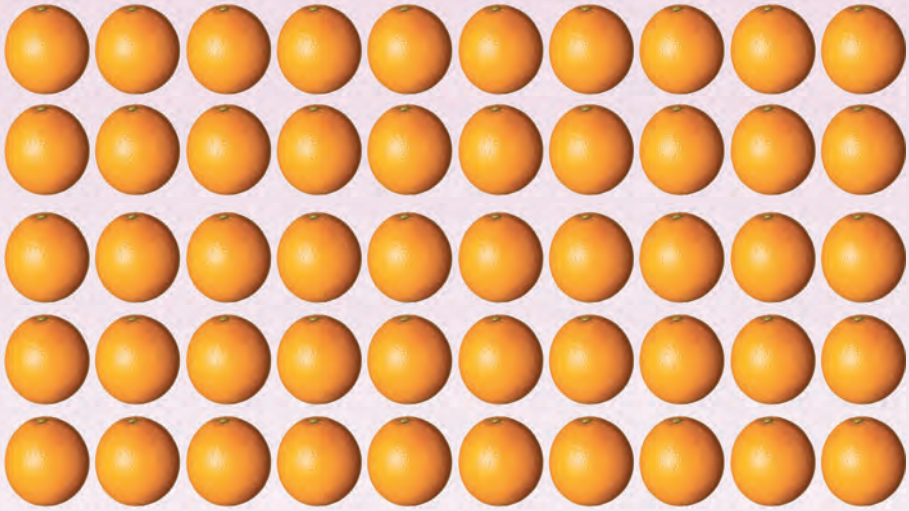
Division and factors continued

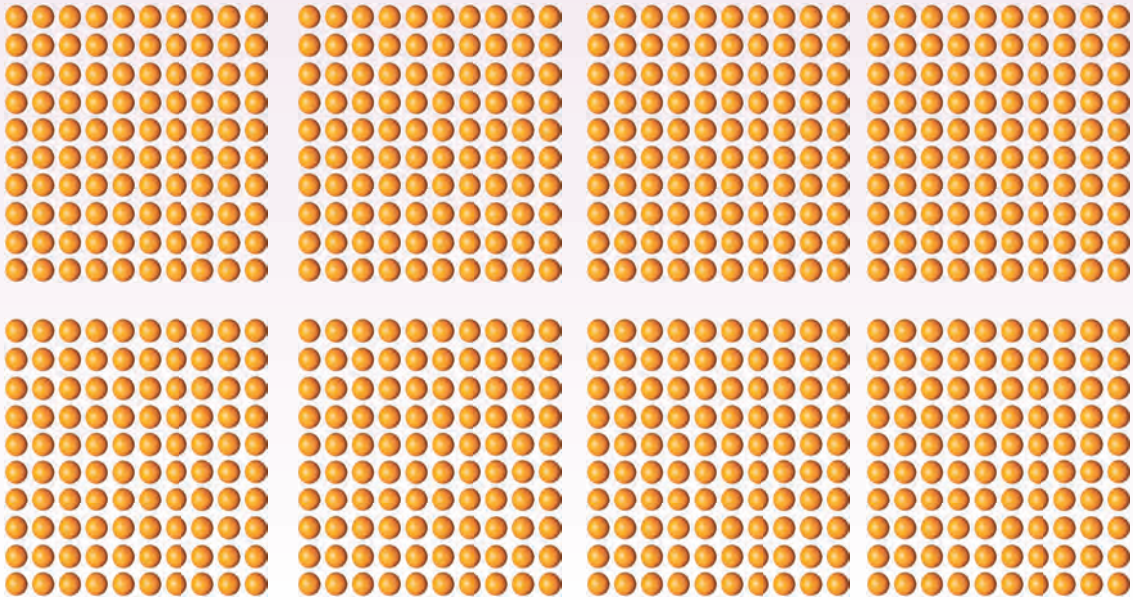
c.



d.



e.



Examples:

Example 1:

42 ÷ 2

= (40 + 2) ÷ 2

= (40 ÷ 2) + (2 ÷ 2)

= 20 + 1

= 21

Example 2:

369 ÷ 3

= (300 + 60 + 9) ÷ 3

= (300 ÷ 3) + (60 ÷ 3) + (9 ÷ 3)

= 100 + 20 + 3

= 123

4. Use the method above. Write down the steps you use.

a. 64 ÷ 2 =

b. 63 ÷ 3 =

c. 48 ÷ 4 =

Continue on an extra sheet of paper.

d. 55 ÷ 5 =

e. 448 ÷ 4 =

f. 318 ÷ 3 =

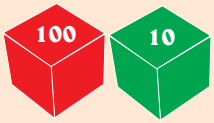
Continue on an extra sheet of paper.

÷

In one minute I can ...

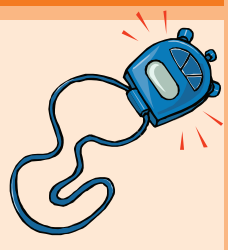
What you need:

– Use the 10 and 100s dice.
– Piece of paper.



What to do:

- Roll a 10s dice and then the 100s dice.
- Divide the bigger number by the smaller number. Write down the division sum with the answer.
- Repeat doing this until your teacher says stop.
- Give your division sum to your partner to mark.
- The winner is the person with the most correct division sums.



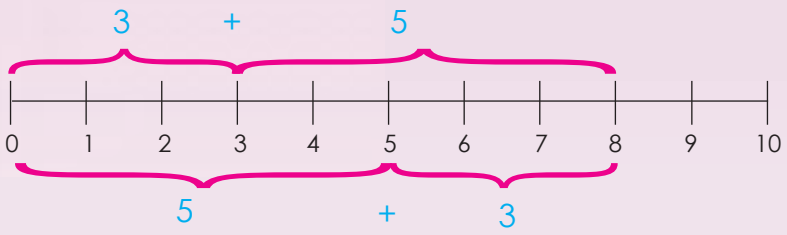
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

How fast can you calculate the following?

4 + 2 =	1 + 7 =	7 + 5 =	6 + 5 =
3 + 6 =	3 + 2 =	8 + 6 =	9 + 9 =
5 + 4 =	1 + 9 =	9 + 4 =	8 + 7 =
2 + 8 =	2 + 4 =	7 + 7 =	

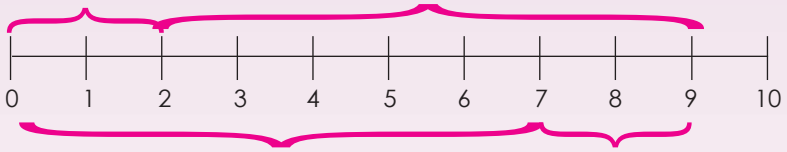
1. Write addition sums for the following: We have done the first example for you.

a.



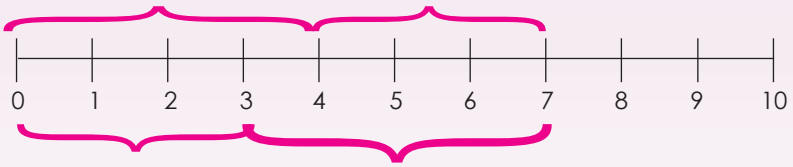
3 + 5 = 5 + 3

b.



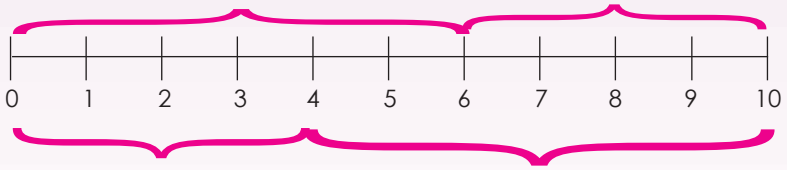
____ = ____

c.



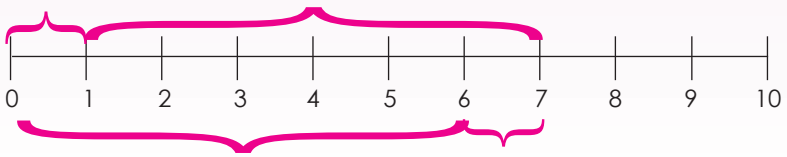
____ = ____

d.



____ = ____

e.



____ = ____

2. What is the value of the ◯ in each of these?

a. 7 + 2 = ◯ + 7

b. 3 + 9 = ◯ + 3

c. 8 + 4 = 4 + ◯

d. 6 + 5 = 5 + ◯

e. ◯ + 1 = 1 + 9

f. 3 + ◯ = 2 + 3

3. What is the value of the ◯ in each of these?

a. 2 x 3 = ◯ x 2

b. 5 x 4 = ◯ x 5

c. 1 x 8 = 8 x ◯

d. 6 x 3 = 3 x ◯

e. 7 x ◯ = 9 x 7

f. ◯ x 5 = 5 x 4

4. Match column A with column B.

Column A	Column B
10 + 2 =	7 + 5 =
4 x 5 =	5 x 4 =
3 + 9 =	2 + 10 =
3 x 2 =	1 + 6 =
5 + 7 =	9 + 3 =
6 x 4 =	5 x 7 =
9 + 4 =	8 x 4 =
7 x 5 =	4 x 6 =
6 + 1 =	4 + 9 =
4 x 8 =	2 x 3 =

Pattern fun

How fast can you get the answers?

5	9	25	100
10	12	50	200
15	15	75	300

Colour the cards

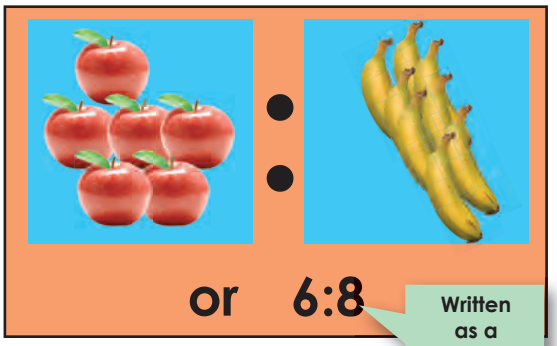
Use different colours to colour in those cards that have the same answer.

6 + 8	7 + 3	2 x 9	6 x 8	3 x 7
9 x 2	9 + 2	6 + 5	5 + 6	2 + 9
7 x 3	8 x 6	8 + 6	3 + 7	6 – 5

7 Ratio and Rate

Discuss the words 'ratio' and 'rate'.

Ratio



Rate

The chicken cost R50 per kg.





1.



a. How many peaches do you see? _____

b. How many bananas do you see? _____

c. What is the ratio of bananas to peaches? _____

d. What is the ratio of peaches to bananas? _____

e. What is the ratio of the peaches to all the fruit? _____



2.



a. How many pink flowers do you count? _____

b. How many yellow flowers do you count? _____

c. How many purple flowers do you count? _____

d. How many white flowers do you count? _____

e. What is the ratio of pink flowers to yellow flowers? _____

f. What is the ratio of yellow flowers to purple flowers? _____

g. What is the ratio of pink flowers to purple flowers? _____

h. What is the ratio of yellow flowers to white flowers? _____

i. What is the ratio of white flowers to pink flowers? _____

continued ☛

3.



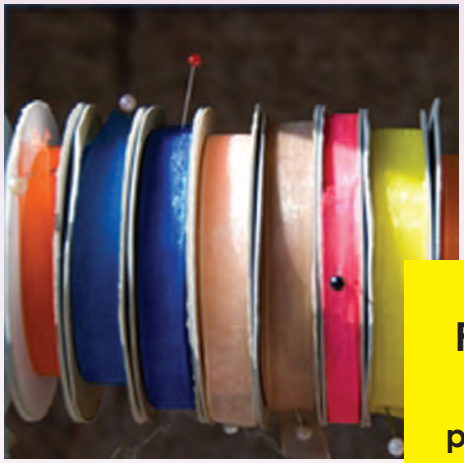
Cheese
R40
per kg



Beef
R60
per kg



Milk
R10
per litre



Ribbon
R5
per metre

Write each statement above using the rate symbol.

a. Cheese is R40/ kg

b. _____

c. _____

d. _____

4. Cheese: R40/kg

a. How much will it cost me to buy 1 kg? _____

b. How much will it cost me to buy 2 kg? _____

c. How much will it cost me to buy 3 kg? _____

d. How much will it cost me to buy 4 kg? _____

e. How much will it cost me to buy half a kilogram? _____

5. If Simon is paid R9/hour to work at the market, how many hours must he work if he wants to make R54?

Continue on an extra sheet of paper.

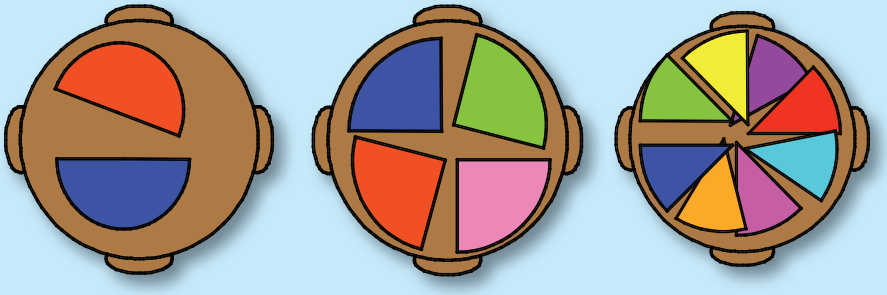
Prices

- Walk around a shop and find 3 items on which they write Rand/cents per kilogram.
- Write down these examples and bring them to class.



8 Fractions

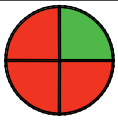
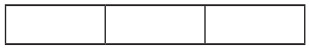
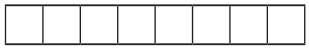
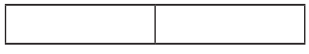
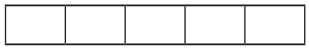
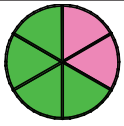
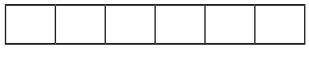
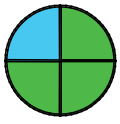
Look at the tables and use words such as half, quarter, and eight.



Three circles of cardboard have been cut up in different ways and the pieces from each circle put on a table.

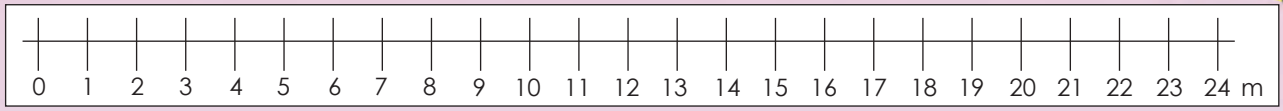
Look at each table and discuss it in a group. What will happen on each table if you put the pieces back together to form a circle?

1. Look at the coloured-in circles. Write a division sum for each.

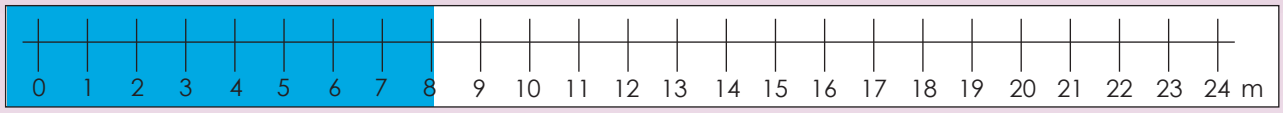
Fraction circle	Fraction that is green	Division sum	Colour the same fraction on this diagram
a. 	$\frac{1}{4}$	$1 \div 4 = \frac{1}{4}$	 $\frac{1}{4}$ is green.
b. 			
c. 			
d. 			
e. 			
f. 			
g. 			
h. 			



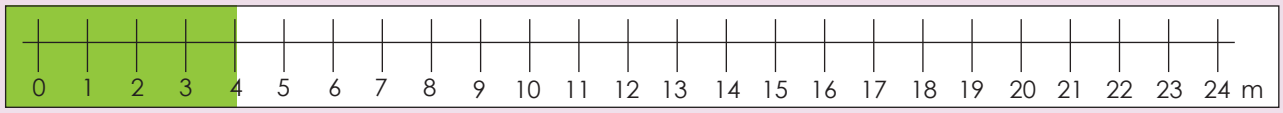
2. Look at this measuring tape and answer the questions.



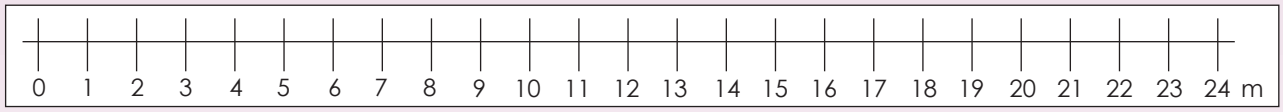
a. What is one half of 24 m? _____ We can say **24 ÷ 2 = 12**.



b. What is one third of 24 m? _____ We can say **24 ÷** _____ **=** _____.



c. What is one sixth of 24 m? _____ We can say **24 ÷** _____ **=** _____.



d. What is one eighth of 24 m? _____ We can say **24 ÷** _____ **=** _____.

3. Using Cut-out 4 as a guide, fill in whether each of these is <, > or =.

a. $\frac{1}{2}$ **>** $\frac{1}{4}$

b. $\frac{1}{2}$ ☐ $\frac{1}{8}$

c. $\frac{1}{8}$ ☐ $\frac{1}{4}$

d. $\frac{1}{3}$ ☐ $\frac{1}{6}$

e. $\frac{1}{6}$ ☐ $\frac{1}{8}$

f. $\frac{1}{5}$ ☐ $\frac{1}{6}$

g. $\frac{1}{7}$ ☐ $\frac{1}{6}$

h. $\frac{2}{4}$ ☐ $\frac{1}{2}$

i. $\frac{4}{8}$ ☐ $\frac{1}{2}$

j. $\frac{2}{6}$ ☐ $\frac{1}{7}$

k. $\frac{4}{6}$ ☐ $\frac{2}{3}$

l. $\frac{4}{5}$ ☐ $\frac{3}{8}$

m. $\frac{7}{8}$ ☐ $\frac{2}{3}$

n. $\frac{8}{8}$ ☐ 1

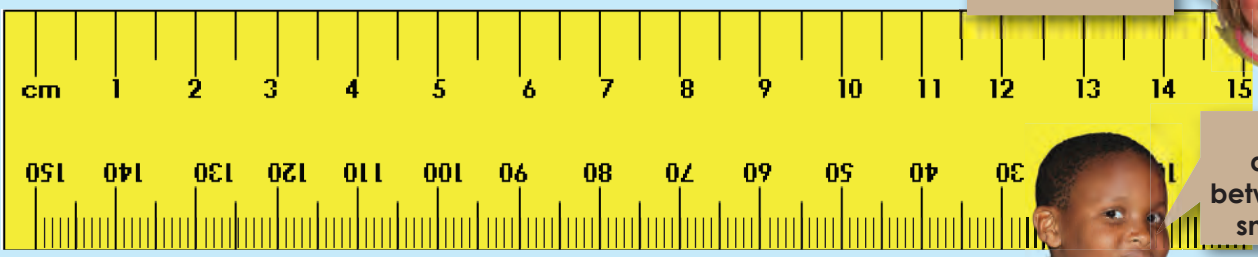
o. $\frac{5}{7}$ ☐ $\frac{4}{5}$

See the fraction game in the next lesson.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

9 Decimal Fractions and Problems

Look at the ruler. Describe it using cm, mm and intervals.





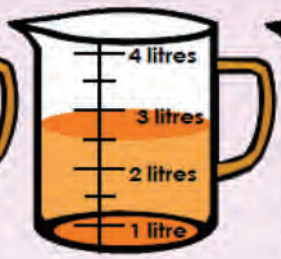
1. How much orange juice is in each jug? Choose and circle the correct answer.

a.



i. 3 litres
ii. 3,5 litres
iii. 2 litres

b.



i. 3 litres
ii. 2,5 litres
iii. 2 litres

c.



i. 4 litres
ii. 2,5 litres
iii. 3,5 litres

d.



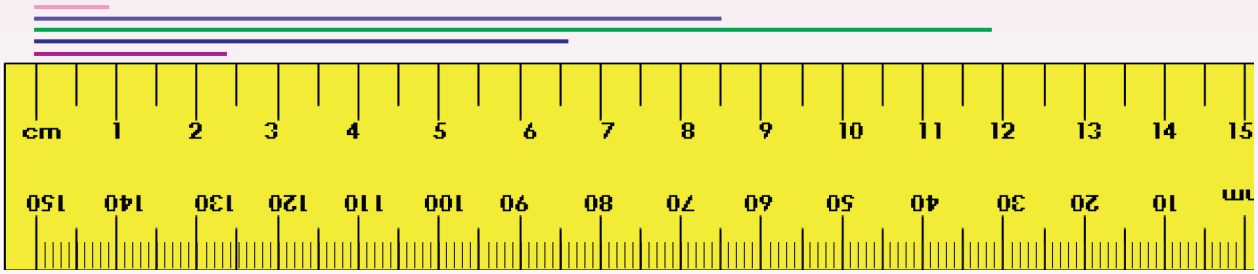
i. 2 litres
ii. 1,5 litres
iii. 2,5 litres

e.



i. 3,5 litres
ii. 4 litres
iii. 2,5 litres

2. How long is each line? Give your answer in millimeters and centimeters.



a. Pink line _____ mm _____ cm

b. Purple line _____ mm _____ cm

c. Green line _____ mm _____ cm

d. Blue line _____ mm _____ cm

e. Red line _____ mm _____ cm

3. There are eight children at my party. Make drawings to solve your questions.

a. Two cakes are shared equally between eight children. What part of a cake will each child get?



b. Each child gets one eighth of the lollipops. How many lollipops will each child get?



c. How much juice will each child get if you share it equally between them.



Fraction fun at home

– With the help of an adult find as many things as you can at home that are divided into equal pieces. Name the object and say into how many pieces it is divided.

Look at the pictures. Discuss what you can do with the money.






1. You and three of your friends collected all your old toys to sell to buy four sports shirts. Each shirt costs R50.



a. Look above. This is what you sold on the first day. How much did you sell?

_____

b. How much money do you need to buy all four shirts?

_____

c. How many shirts can you buy with the money you made on the first day?

_____

d. How much more do you need to sell to buy the four shirts?

_____

2. After three days you sold everything. You kept a record of what you were selling. Now you need to calculate everything.



First day	I sold: R1 5, 0 0 R1 7, 0 0 + R4 5, 0 0 _____ _____	We still need to sell _____ worth of toys to buy all the shirts. Calculate it here.
Second day	I sold: R2 5, 0 0 R3 5, 0 0 R 8, 0 0 + R2 2, 0 0 _____ _____	We still need to sell _____ worth of toys to buy all the shirts. Calculate it here.
Third day	I sold:	Do we have enough money for 4 shirts? Show it here.

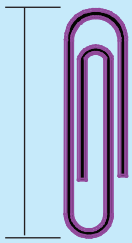
My wish …



- Write down what you really want to buy.
- How much does it cost?
- What can you do to get the money?

11 Length





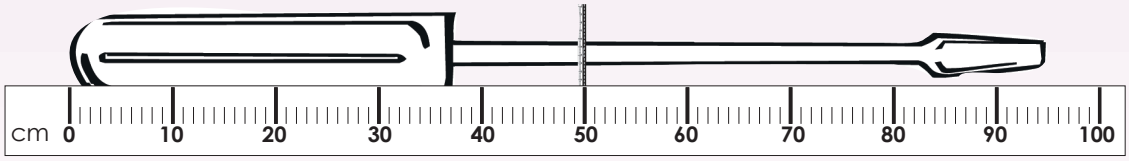
About 3 cm

About how many paper clips long is the pencil?
How did you find out?

1. A paper clip is about 3 centimetres long.
Use the paper clip as a measure to make these estimates. Check your estimates by measuring to the nearest centimetre.

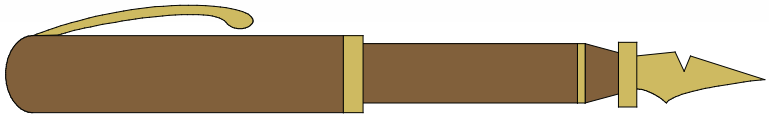
	Estimate	Measure
a. Length of your thumb.		
b. Width of your maths book.		
c. Length of a crayon.		
d. Length of a pencil.		
e. Length of an envelope.		
f. Length of an eraser.		

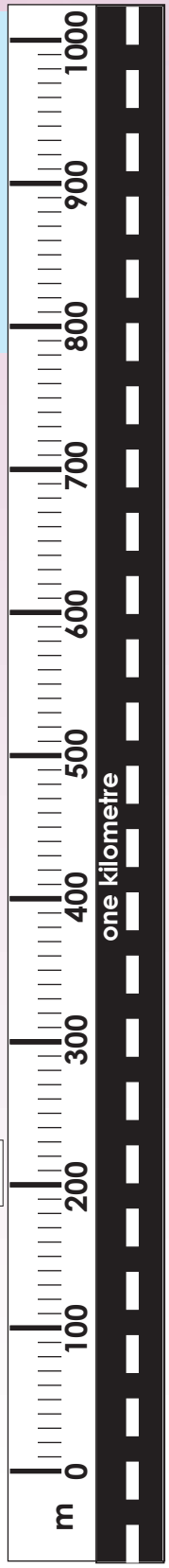
2. Use your centimetre ruler. Write the length of each object.



a. 

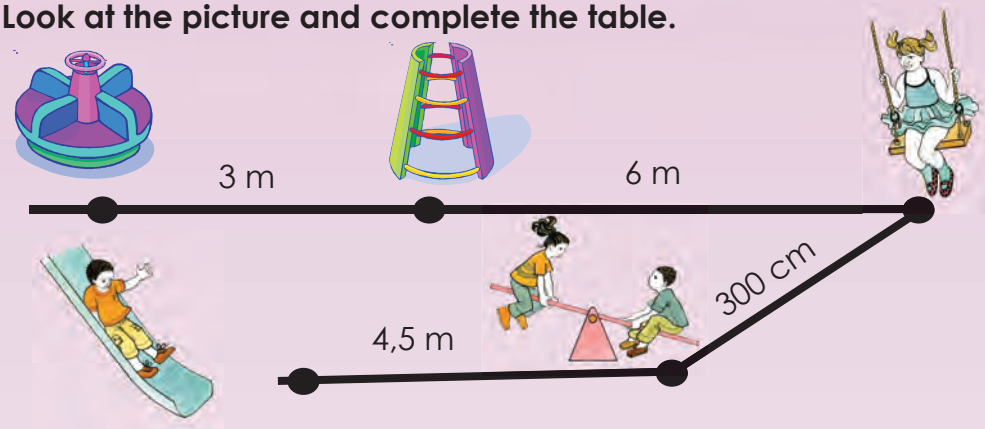
b. 

c. 





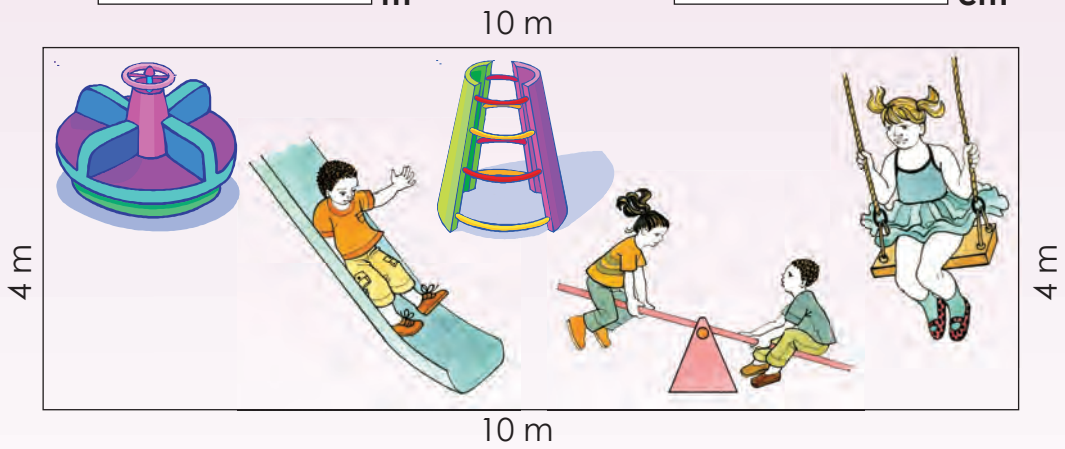
3. Look at the picture and complete the table.



Distance from:	Metres (m)	Centimetres (cm)
The merry–go–round to the ladder.		
The ladder to the swing.		
The swing to the seesaw.		
The seesaw to the slide.		

4. A fence was built around the playground. How long is the fence? Write your answer in metres and centimetres.

_____ **m** _____ **cm**



How tall?



- How tall are you?
- How tall is your mother or caregiver?
- How tall is your teacher?
- How tall is your principal?

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

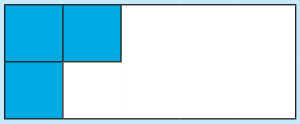
12 Area and Perimeter

The area of a shape is the number of square units needed to cover the inside shape.

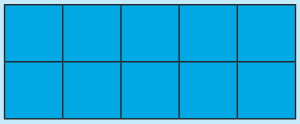


Square units



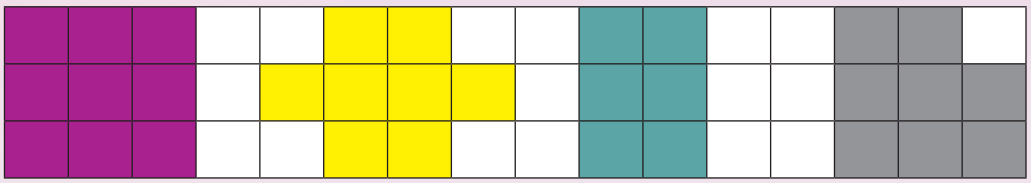






The area is 10 square units.

1. Find the area of each shape and write your answers in square units.

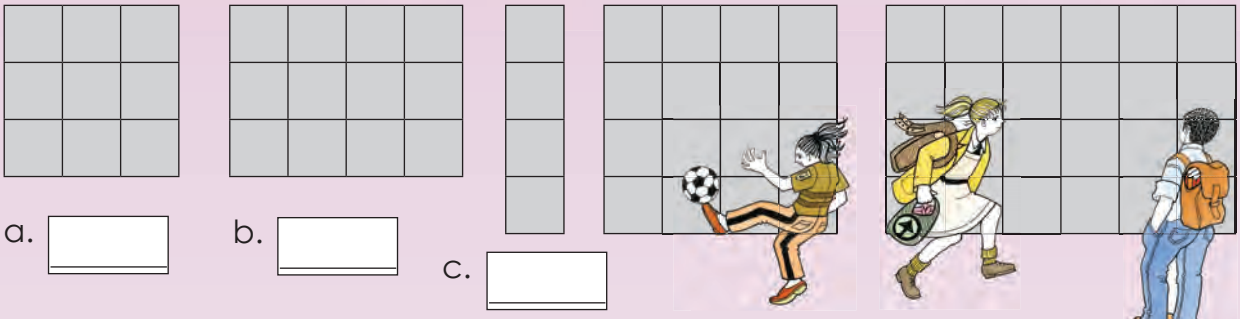


a. _____ b. _____ c. _____ d. _____

2. Draw the shape described.

a. A red square with an area of 1 square unit.
b. A green rectangle with an area of 4 square units.
c. A yellow rectangle with 12 square units.
d. A blue rectangle with an area of 10 square units that is longer than it is wide.

3. Find the area of each shaded rectangle in square units. Be sure to count the parts you cannot see.



a. _____ b. _____ c. _____ d. _____ e. _____

4. A counter top is covered with four rows of square tiles.
There are 9 tiles in a row. What is the area of the counter top in tiles? Make a drawing to show your answer.

5. A counter top is covered with three rows of square tiles.
There are 8 tiles in each of the first two rows and 7 tiles in the third row. What is the area of the counter top in tiles? Make a drawing to show your answer.

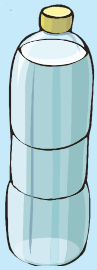
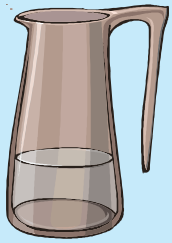
Tiling fun

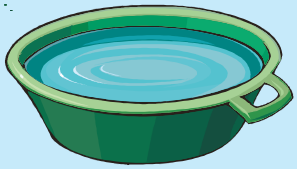
– You are using these tiles to tile the floor.

– How many tiles do you need to tile the floor on the right?

13 Capacity

Work in groups. Get some large containers. Estimate which of them would hold about one litre



1. Fill in the correct answer.

a. A cup holds _____ the orange juice carton.
more than, less than, the same as

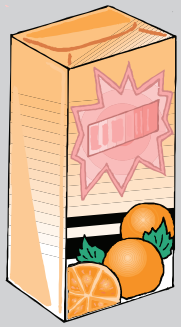
b. The orange juice carton holds _____ the cup.
more than, less than, the same as

c. The jug holds _____ the orange juice carton.
more than, less than, the same as

d. The jug holds _____ the cup.
more than, less than, the same as

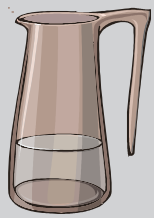
e. The orange juice carton holds _____ the jug.
more than, less than, the same as

An orange juice carton holds 1 litre.





This cup holds 250 ml.



This jug holds 500 ml.

2. Estimate whether the objects hold more than, less than or about the same as 1 litre.

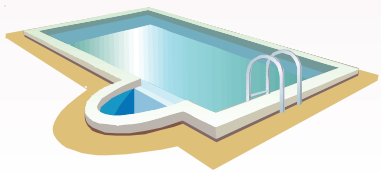

_____


_____


_____


_____


_____


_____



3. How much water can the measuring a jug below hold?

_____

4. Say how much each measuring jug holds?



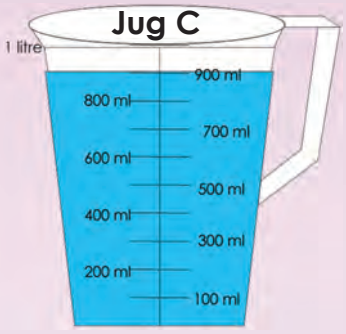
a. _____ ml

_____ *l*



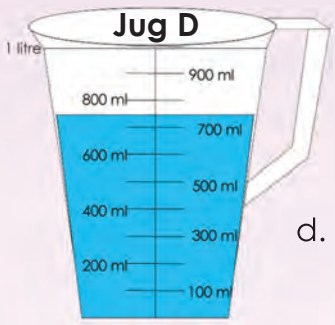
b. _____ ml

_____ *l*



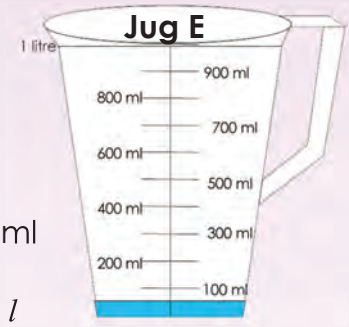
c. _____ ml

_____ *l*



d. _____ ml

_____ *l*



e. _____ ml

_____ *l*

i. Which jug holds the most? _____

ii. Which jug holds the least? _____

iii. How much more does jug B have than jug E? _____

iv. How much more does jug A have than jug B? _____

v. Which jug holds less than 500 ml? _____

At home ...

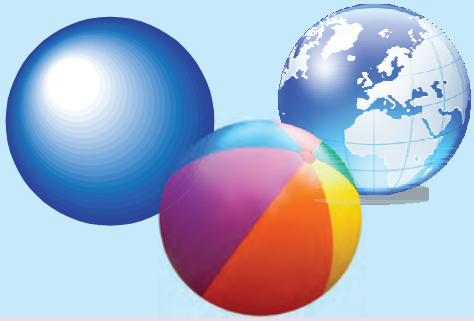
Find five things that hold less than I litre and five things that hold more than 1 litre at your home.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

2-D Shapes and 3-D Objects

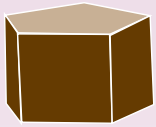
Name these 3-dimensional objects. Where in your environment will you find them?

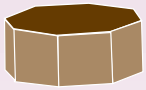




1. Say whether each 3-D object is a pyramid or a prism.

a.  _____

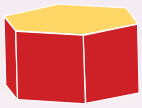
b.  _____

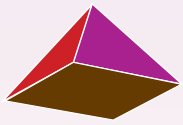
c.  _____

d.  _____

e.  _____

f.  _____

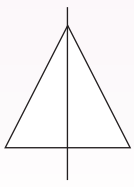
g.  _____

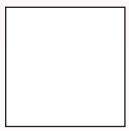
h.  _____

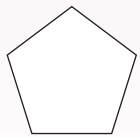
i.  _____

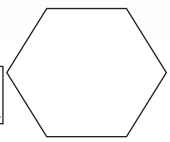
j.  _____

2. Name all the 2-D shapes. How many lines of symmetry does each shape from 2a to 2e have? Draw the line on the shape and write the number next to it.

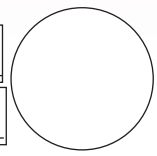
a. 1 Triangle 

b. _____ _____ 

c. _____ _____ 

d. _____ _____ 

e. _____ _____ 

f. _____ _____ 

3. Choose the correct shapes to go with the correct prism/pyramid.



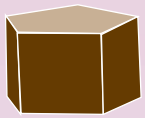
a. Triangular prism



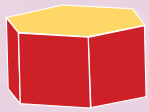
b. Rectangular prism



c. Cube



d. Pentagonal prism



e. Hexagonal prism



f. Tetrahedron/ Triangular pyramid



g. Square pyramid

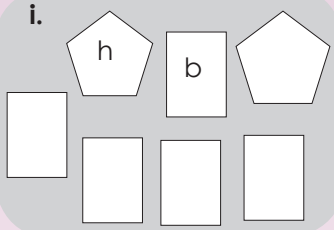


h. Pentagonal pyramid

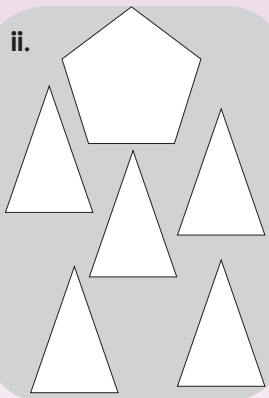


i. Hexagonal pyramid

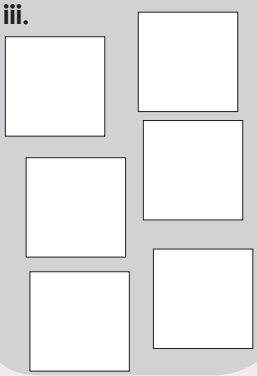
i.



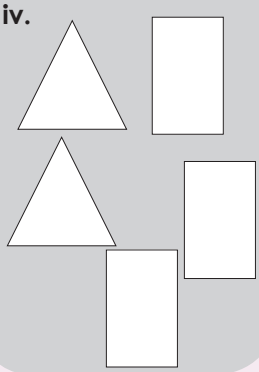
ii.



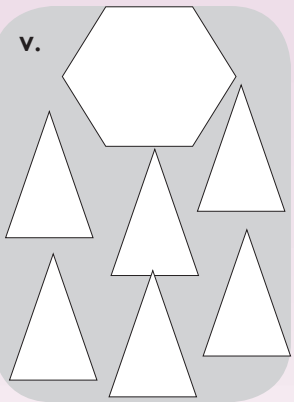
iii.



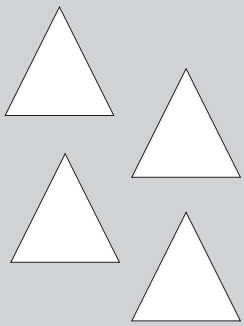
iv.



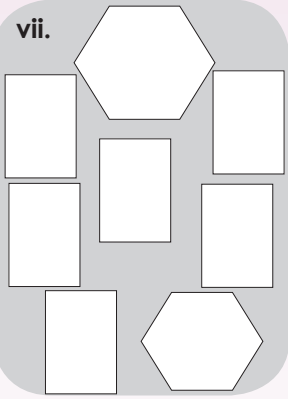
v.



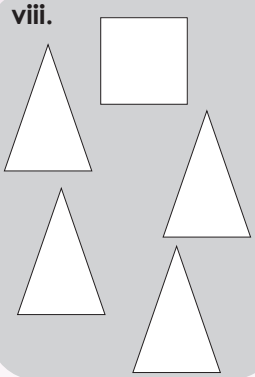
vi.



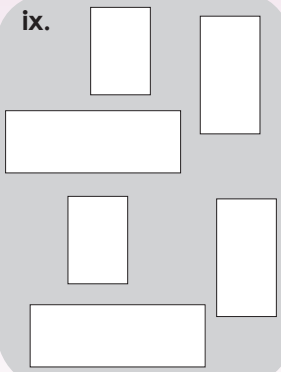
vii.



viii.



ix.

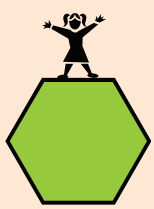


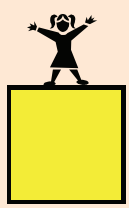
Tessellate?

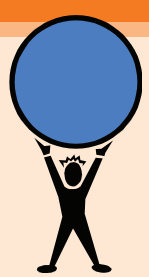
Can these shapes tesselate on their own?











15 Mass

What is mass? Look at the pictures below and discuss it.



Grams and kilograms are metric units used to measure how heavy objects are.



A paper clip weighs about 1g.



A book weighs about 1 kg.

Use a benchmark to estimate the mass of these objects in grams or kilograms. Check each object on a scale.







1. Will you use grams or kilograms to weigh the following:

a. 

b. 

c. 

d. 

e. 

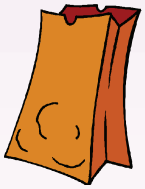
2. Use the object on the left to estimate whether the object is heavier or lighter than kilogram or gram.



1 kilogram



1 gram

a. Paper bag 

b. Shoes 

c. A loaf of bread 

d. Pencils 

e. Scissors 

f. Calculator 



3. Look at the scales and answer the questions.

a. Which objects weigh less than 700 g? _____

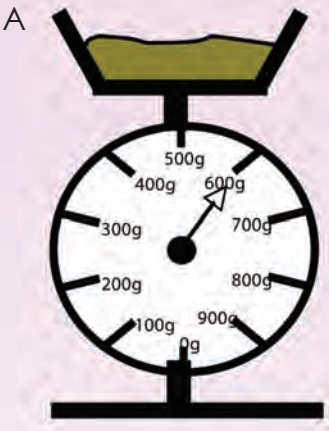
b. Which objects weigh between 500 g and 1 kg? _____

c. Which is the heaviest object? _____

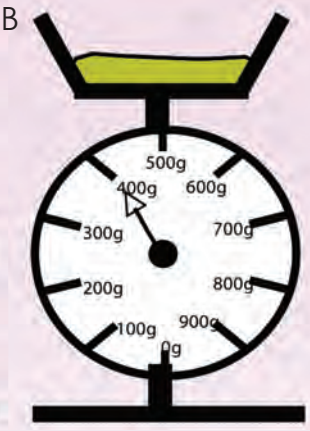
d. What is the total mass of objects A and D? _____

e. What is the total mass of objects B and C? _____

A



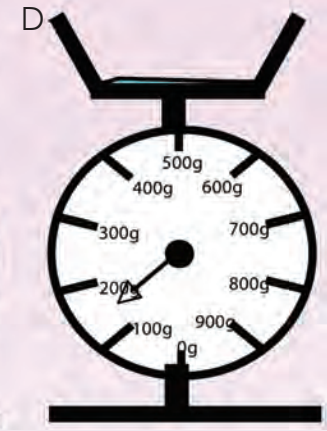
B



C



D



4. Look at the two containers.

Are they the same size? _____ Do they weigh the same? _____





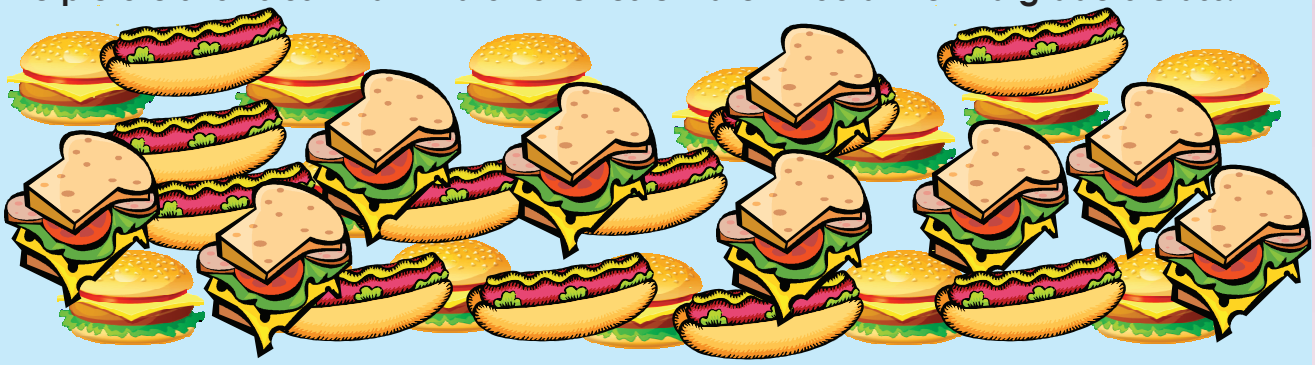
The winning bag



- Each learner should gather assorted objects from around the classroom and place them in his or her bag Fill each bag until it is estimated that it weighs about 1 kilogram.
- Select one class member to weigh each bag. The winner is the learner whose bag weighs closest to 1 kilogram.
- You can repeat the activity by filling the bags with different objects.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

The picture shows us what kind of lunches children would like in a grade 5 class.

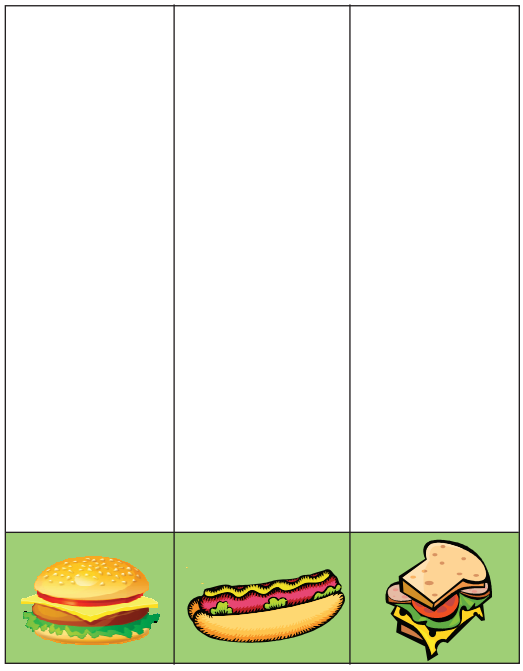


1. Sort the types of lunch liked by these grade 5 learners by completing the table.

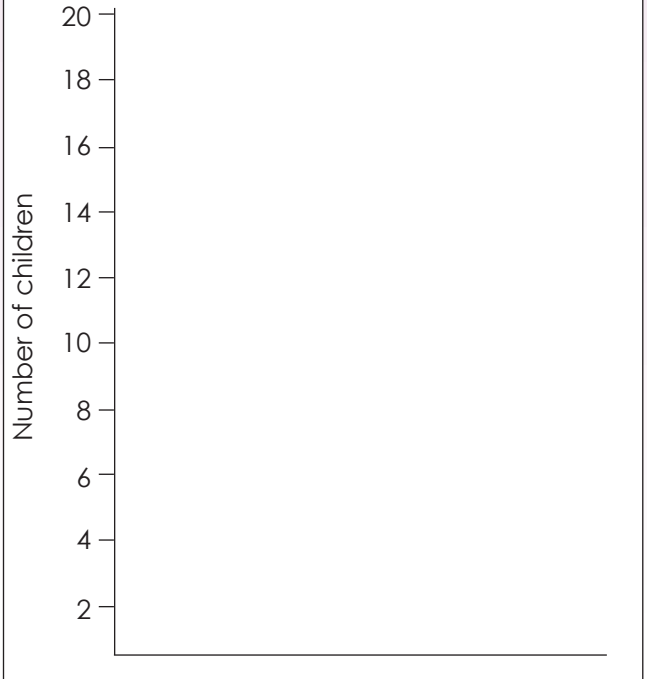
Type of lunch	Number of children
Hamburger	
Hotdog	
Sandwich	

2. Use the information in the table above to draw a pictograph and bar graph.

Pictograph



Bar graph



3. Answer the following questions from your bar graph:

a. How many children like hamburgers in this grade 5 class? _____

b. How many children like hotdogs in this grade 5 class? _____

c. How many children like sandwiches in this grade 5 class? _____

d. Which is the most popular lunch in this grade 5 class? _____

e. Which is the least popular lunch in this grade 5 class? _____

4. Write 3 headings: Certain to happen, Certain not to happen, Uncertain. Classify each of the following under one of those headings:

- Snow in our town or place tomorrow.
- Hail in our town or place tomorrow.
- Sneeze with open eyes.
- I will be a day older this time tomorrow.
- A woman will be a president of South Africa one day.
- Our soccer team will win the league this year.
- Somewhere in the world someone is being born right now.
- Add one event of your own to each of the lists.

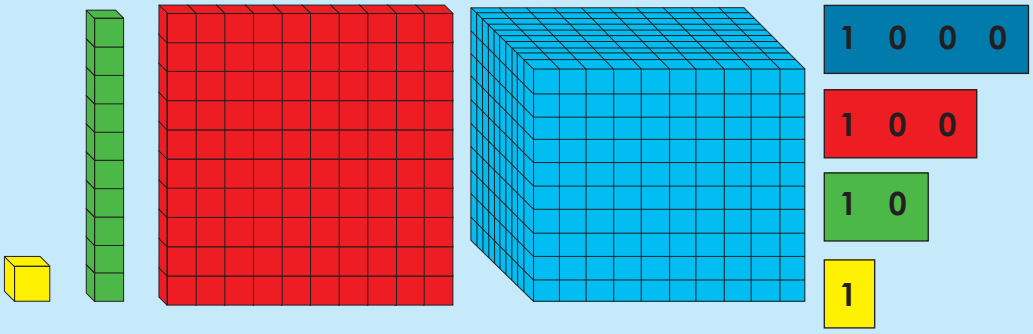
Who is lucky?



- Play in pairs.
- Use a coin again. Start the game by asking: "Who is lucky?"
- The first player will toss the coin ten times. Before tossing it he or she must guess on which side the coin will land the most often. If the player is correct the player will get 1 point.
- The second player does the same.
- In pairs do this ten times. The player with the highest score is the winner.

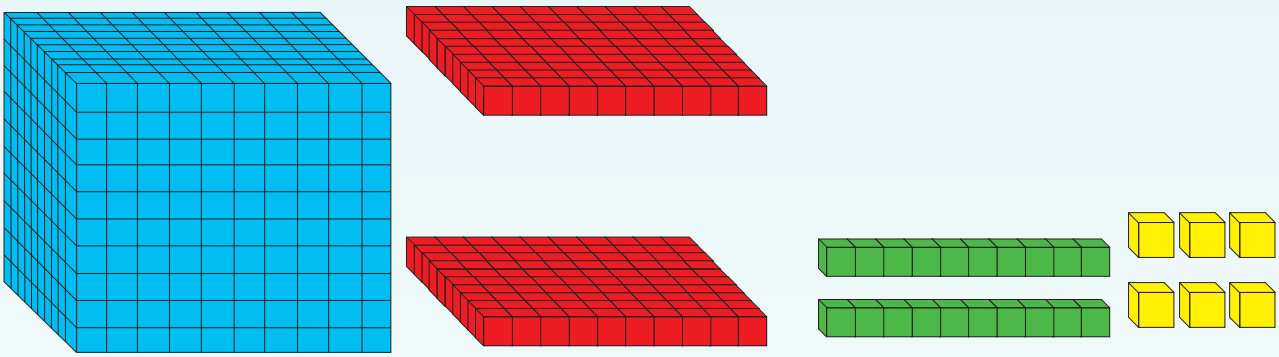
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

How many cubes are there in total? Match the place value cards with the base ten blocks.

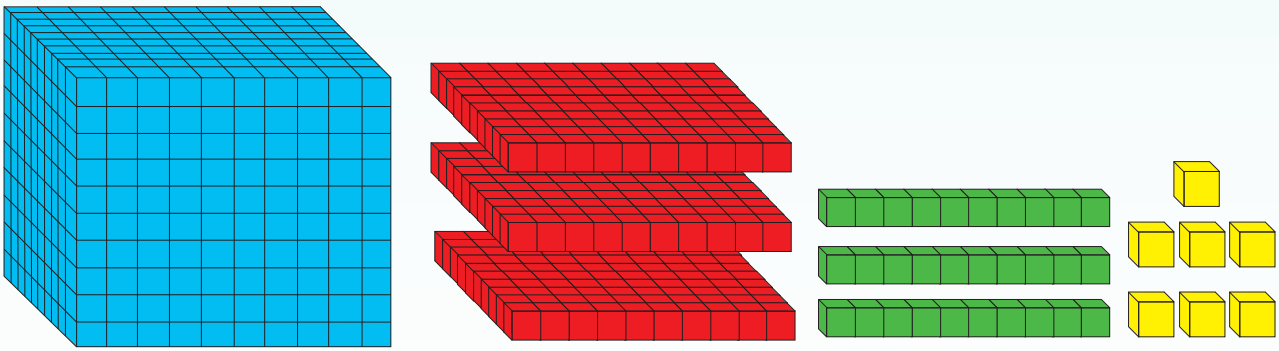


1. Count the cubes.

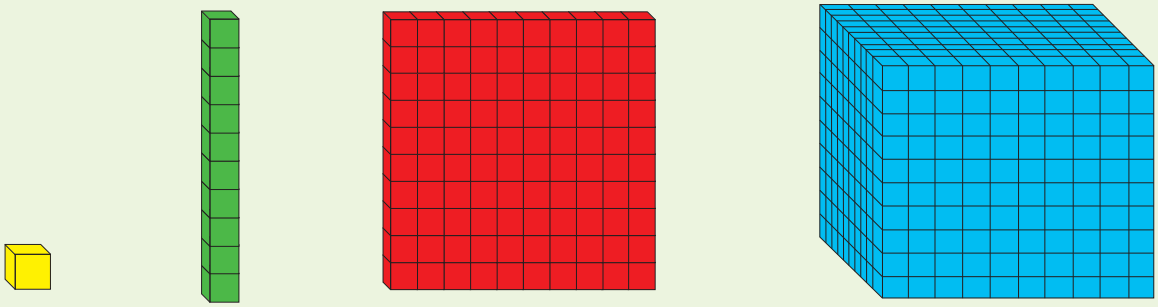
a.



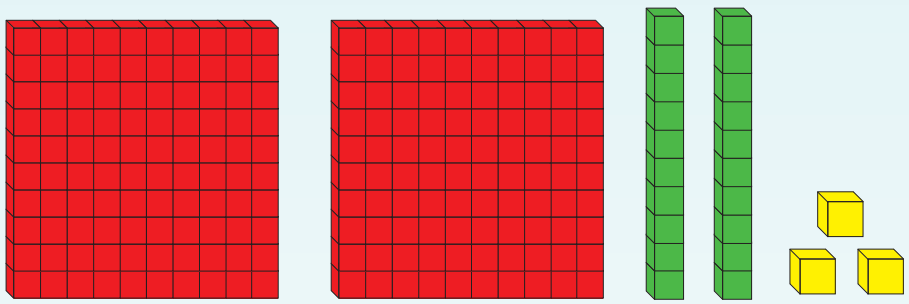
b.



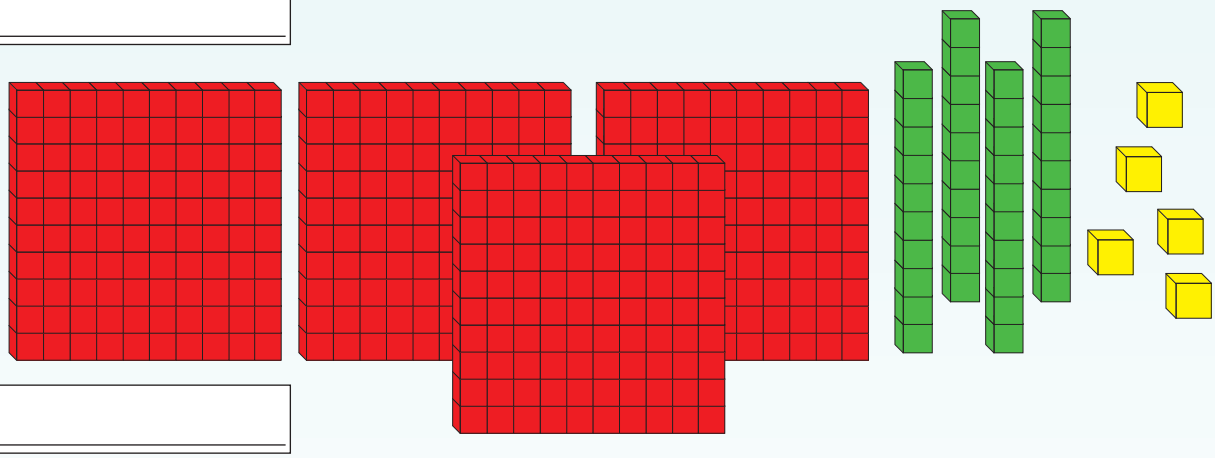
2. How many cubes are there in total?



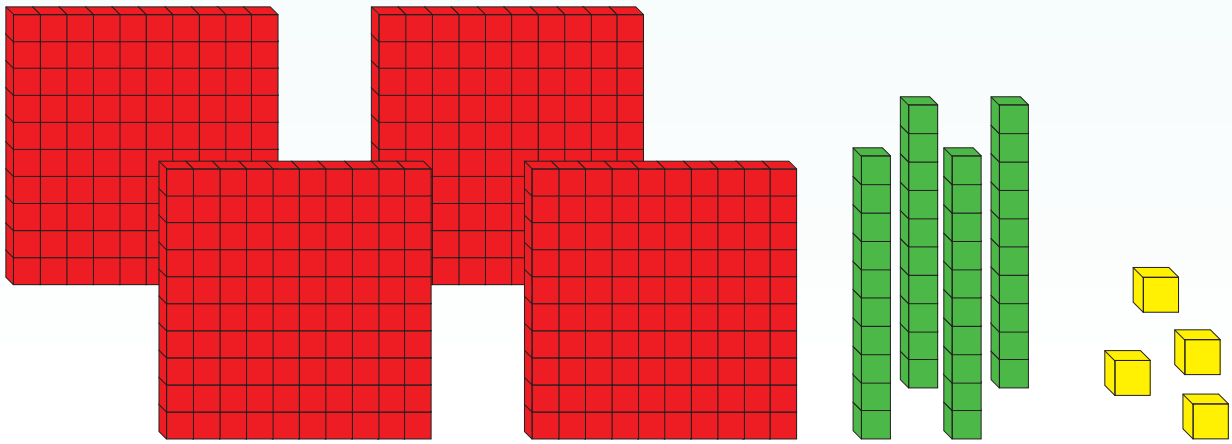
a.



b.



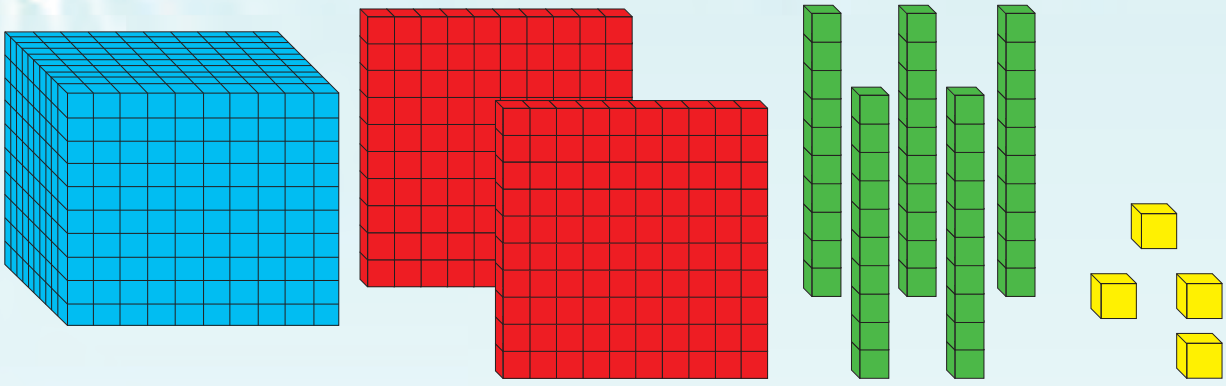
c.



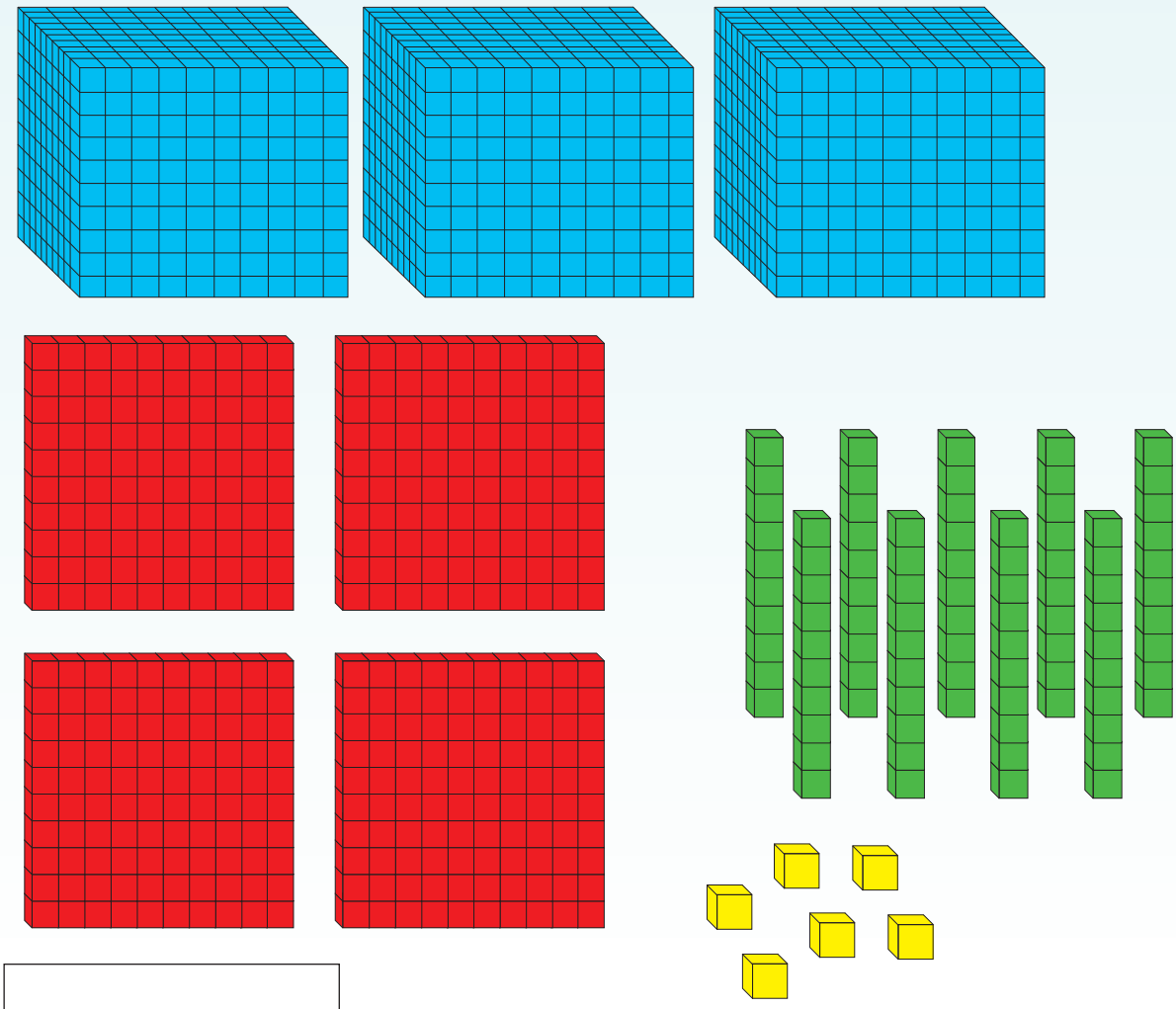
continued ☛

Numbers to 1 000 continued

d.



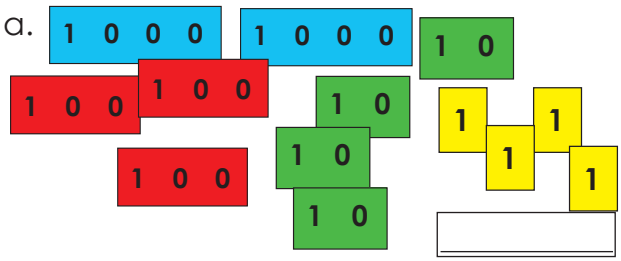
e.



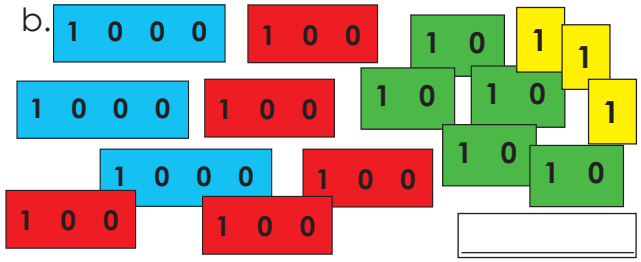


3. Add all the place value cards.

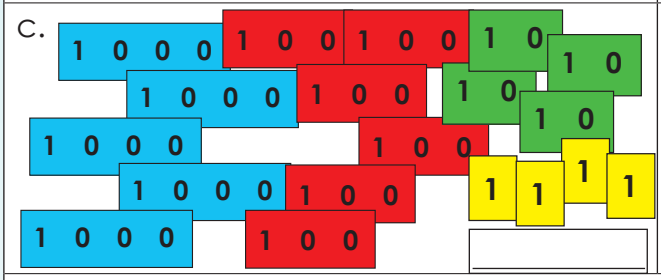
a.



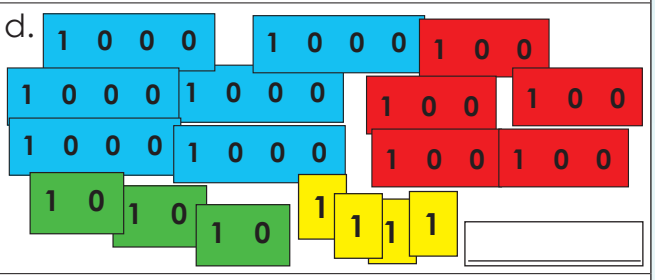
b.



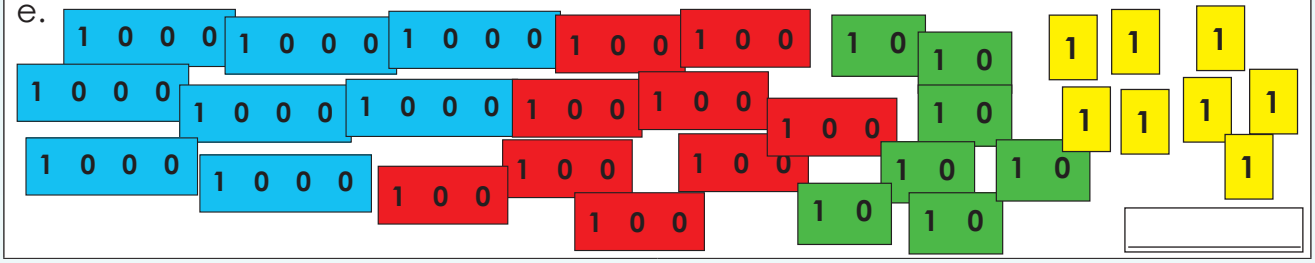
c.



d.



e.



4. Calculate the following:

a. 1 000 + 100 + 100 + 100 + 10 + 10 + 1 + 1 = _____

b. 1 000 + 1 000 + 100 + 100 + 100 + 100 + 10 + 10 + 1 + 1 + 1 + 1 + 1 = _____

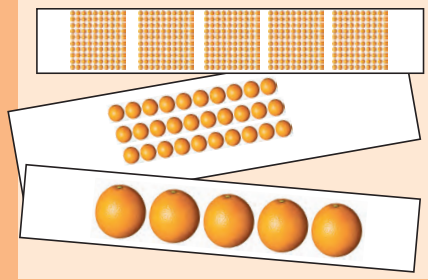
c. 1 000 + 100 + 1 000 + 100 + 10 + 100 + 1 + 1 = _____

d. 1 000 + 1 + 100 + 10 + 1 000 + 10 + 100 + 100 + 1 = _____

e. 10 + 10 + 100 + 100 + 1 000 + 10 + 1 + 100 + 1 000 = _____

How quick are you?

What you need:
- Cut-out 1.

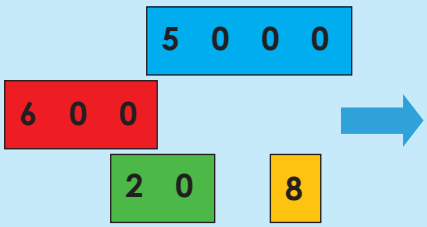


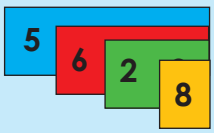
What to do:
- Play in pairs.
- Cut out the cards from the back of your books.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- See who can give the total the quickest.
- Add 1 000 to your answer.
- Check your partner's answer.
- Do the same with 6/7/8/9/10 cards. Remember to add a 1 000.
- The person with the most correct answers is the winner.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

18 Numbers 0 – 10 000

What number will these cards make?





5 628

In words it is Five thousand six hundred and twenty-eight.

Use Cut-out 2 to show five different numbers.

1. Complete the following:

a. 8 000 + 400 + 30 + 2 = _____

b. 3 000 + 800 + 50 + 1 = _____

c. 1 000 + 200 + 80 + 7 = _____

d. 4 000 + 900 + 3 = _____

e. 7 000 + 7 = _____

2. Write the number in the correct column:

		Thousands	Hundreds	Tens	Units
a.	3 487	3	4	8	7
b.	4 204				
c.	6 003				
d.	8 710				
e.	6 080				

3. You need some coloured pencils to complete this question. Complete the following using the first question to guide you.

a. 8 183 = **8 thousands + 1 hundred + 8 tens + 3 units**

b. 6 325 = _____

c. 5 555 = _____

d. 2 806 = _____

e. 6 005 = _____

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

4. Complete the table below:

		Expanded notation	Words
a.	6 578		
b.	3 254		
c.	5 504		
d.	9 540		
e.	8 003		

5. What is the value of the underlined digit?

a. 6̲ 214 _____

b. 5 89̲1 _____

c. 5̲ 004 _____

d. 1 2̲40 _____

e. 8 0̲40 _____

6. What will you do to change the number?

a,	4 824	- 400	4 424
b.	3 154		154
c.	2 054		2 004
d.	3 879		3 070
e.	5 571		5 000

Find the number.

What to do:
- Bring a newspaper to class.
- Find five 4-digit numbers. Write them down.
- Share with the class what each number means.

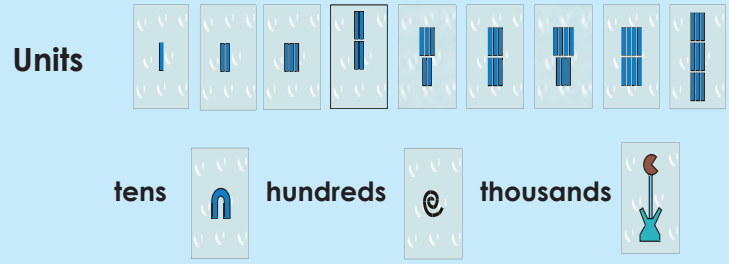
What you need:
- A newpaper



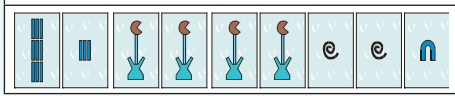
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

19 Numbers 0 – 10 000

Look at these Egyptian numbers. Make any 5-digit number using the Egyptian numbers.



1. Complete the table below:

Egyptian number	Number	Expanded notation
	1 431	1 000 + 400 + 30 + 1
		
		
		
		

2. Arrange the numbers from the smallest to the biggest.

a. 6 923, 6 239, 6 329, 6 223, 6 326 _____

b. 3 210, 3 201, 3 012, 3 021, 3 011 _____

c. 7 776, 7 767, 7 677, 7 676, 7 656 _____

d. 8 008, 8 080, 8 808, 8 800, 8 000 _____

e. 3 555, 5 335, 5 533, 5 535, 3 535 _____

3. Fill in < or >.

a. 6 923 [>] 6 293

b. 3 102 [ ] 3 103

c. 5 333 [ ] 6 222

d. 2 222 [ ] 2 220

e. 4 929 [ ] 4 992



greater than

>



4. What is the value of the 7 in all the numbers?

a. 2 784 _____ b. 7 582 _____ c. 5 487 _____

d. 7 519 _____ e. 3 752 _____

5. Complete the following:



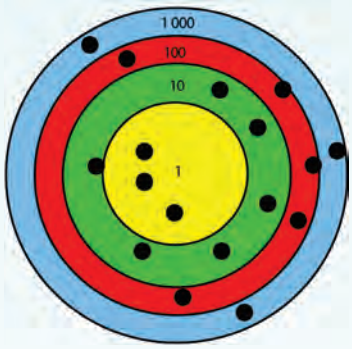
a. Use each digit once, make the smallest 4-digit number: _____

b. Use each digit once, make the largest 4-digit number: _____

c. You can use a digit twice, make the smallest 4-digit number: _____

d. You can use a digit twice, make the largest 4-digit number: _____

6. Complete the following:



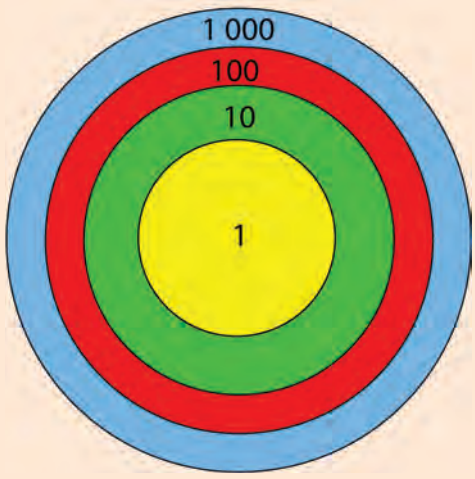
You tossed some stones on a game board. This was your result. If you add the numbers, what is the total?

_____

Who can get the largest number?

What you need:
- The game board on the right.
- Small stones.

What to do:
- Toss your stone on the board.
- Write down the number it landed on.
- Do this ten times.
- Add the numbers.
- The winner in a group is the person with the highest score.



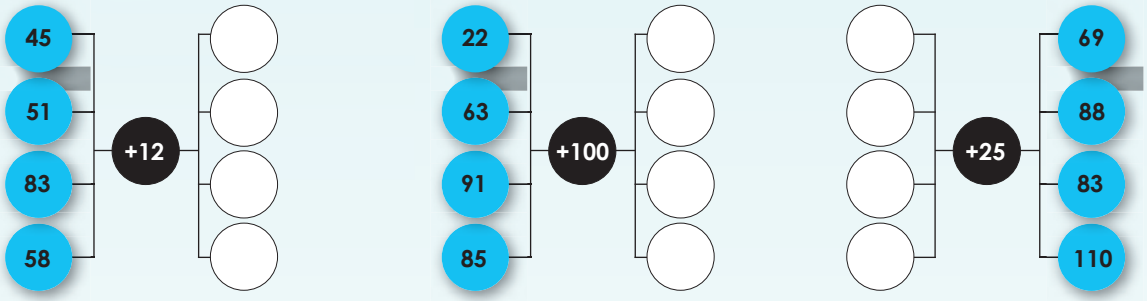
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

20 Number Patterns

Quick recall: How fast can you answer the following?

1 + 4 =	1 x 5 =	1 x 4 =	4 + 5 =	4 x 8 =	3 + 4 =
4 x 7 =	4 + 6 =	1 + 5 =	6 + 5 =	4 + 9 =	4 x 9 =
3 x 5 =	4 x 5 =	3 x 4 =	5 x 5 =	8 + 5 =	4 x 4 =
4 + 8 =	6 x 5 =	9 x 5 =	2 + 4 =	4 x 6 =	4 + 7 =
7 + 5 =	4 + 4 =	3 + 5 =	2 x 5 =	2 x 4 =	2 + 5 =

1. Complete the spider diagram.



2. Extend the following patterns.

a. 25, 30, 35, ____, ____, ____

b. 25, 50, 75, ____, ____, ____

c. 110, 120, 130, ____, ____, ____

d. 99, 94, 89, ____, ____, ____

e. 177, 167, 157, ____, ____, ____

f. 31, 56, 81, ____, ____, ____

g. 747, 757, 767, ____, ____, ____

h. 351, 362, 373, ____, ____, ____

i. 2 100, 2 200, 2 300, ____, ____, ____

j. 10 000, 9 993, 9 986, ____, ____, ____

3. Identify the rule in each case.

a. 21, 26, 31 _____

b. 26, 51, 76 _____

c. 125, 150, 175 _____

d. 1 011, 1 021, 1 031 _____

e. 2 061, 2 066, 2 071 _____

4. Patterns are shown here. Explain each one in words.

	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81









Patterns everywhere

Look at the patterns on the board. Describe each one in your own words.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

What is the difference between the numbers in each of these rows?

100	200	300	400	500	600	700	800	900	1 000
101	201	301	401	501	601	701	801	901	1 001
110	210	310	410	510	610	710	810	910	1 010
995	1 995	2 995	3 995	4 995	5 995	6 995	7 995	8 995	9 995
400	1 400	2 400	3 400	4 400	5 400	6 400	7 400	8 400	9 400

1. What number comes next?

a. 30, 40, 50, _____

b. 600, 700, 800, _____

c. 2 545, 3 545, 4 545, _____

d. 2 605, 2 705, 2 805, _____

e. 5 484, 6 484, 7 484, _____

f. 1 610, 1 710, 1 810, _____

2. Complete the table.

Number	Add 1 000	Add 100	Add10	Add 1
3 548				
8 354				
2 632				
1 036				
4 999				

3. Fill in the missing number:

a. 8 + ☐ = 10

b. 15 + ☐ = 20

c. 80 + ☐ = 100

d. 72 + ☐ = 100

e. 150 + ☐ = 200

f. 332 + ☐ = 350

g. 325 + ☐ = 400

h. 1 750 + ☐ = 2 000

i. 3 220 + ☐ = 3 500

j. 5 440 + ☐ = 6 000

4. Complete the table by filling in the missing numbers.

		Complete up to the next 10.	Complete up to the next 100.	Complete up to the next 1 000.
a.	457	457 + 3 = 460	457 + ☐ = 500	
b.	125	125 + ☐ = 130	125 + ☐ = 200	125 + ☐ = 1 000
c.	575	575 + ☐ = 580	575 + ☐ = 600	575 + ☐ = 1 000
d.	853	853 + ☐ = 860	853 + ☐ = 900	853 + ☐ = 1 000
e.	976	976 + ☐ =	976 + ☐ =	976 + ☐ =

continued ☛

Examples:

Example 1:

5 637+ 2 358

= 5 000 + 2 000 + 600 + 300 + 30 + 50 + 7 + 8

= 7 000 + 900 + 80 + 15

= 7 000 + 900 + 80 + 10 + 5

= 7 000 + 900 + 90 + 5

= 7 995

Example 2:

	5	6	3	7
+	2	3	5	8
			1	5
			8	0
		9	0	0
+	7	0	0	0
	7	9	9	5

(7 + 8)
(30 + 50)
(600 + 300)
(5 000 + 2 000)

5. Use both methods above to calculate the following.

a. 3 268 + 1 211 =

b. 5 455 + 3 540 =

Continue on an extra sheet of paper.

c. 4 765 + 3 219 =

d. 7 214 + 1 397 =

Continue on an extra sheet of paper.

e. 6 984 + 659 =

f. 8 647 + 768 =

Continue on an extra sheet of paper.

6. **Of all the methods of addition which you've learnt so far, which one do you like the most and why? Write an example of your favourite method here.**

Continue on an extra sheet of paper.

What is the size of your number?

What you need:
- Use the 10s, 100s and 1 000s dice made before.
- Piece of paper.



What to do:
- Individual game against a group or the class.
- Roll the green 10s dice.
- Add the number landed on, to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Repeat the activity with the 100 s and 1 000s dice.
- Learners check each others' addition sums.
- The winner is the person with the most correct answers.

3 428
2 573
4 264
5 638
3 242

22 Addition Problems

How fast can you answer these?

- **Add** 2 000 + 1 000 + 300 + 50 + 8 +2.
- What is the **sum** of 5 000 and 2 000?
- How much is 6 000 and 300 **altogether**?
- What three numbers have a **total** of 500?
- Add 37 **and** 12.
- What is the **sum of** 200 and 36?
- How much is 95 and 25 **altogether**?
- Which three numbers have a **total of** 100?

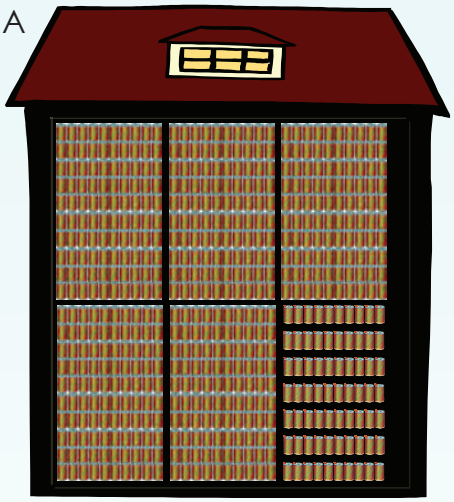
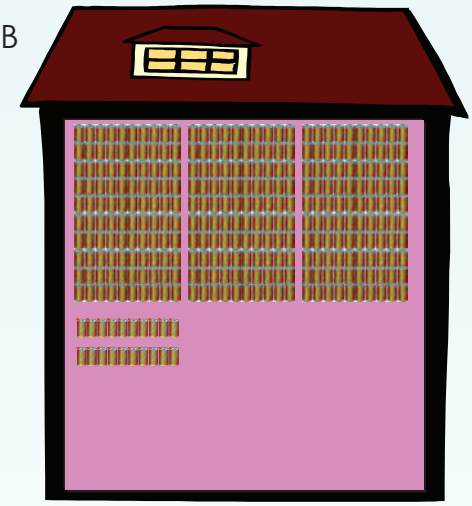
How did the blue words help you?

What word will help you to choose the operation?



1. Solve the following problems. The pictures may guide you. Also use the blue word.

a. Shop A sells 570 cans of cold drink. Shop B sells 320 cans of cold drink. How many cans of cold drink do both shops sell altogether.

Shop A  and + Shop B 

500 + 300 + 70 + _____

= _____

= _____

= _____

= _____

Try to form a picture in your mind. These are the number of cans.



b. My uncle, a truck driver, travelled 1 475 km in early January. He then travelled 276 km more. How far did he travel in January?

i. What picture do you see when you think about this problem? Draw it.



ii. What operation should you use? _____

iii. Solve the problem. Write it down in your writing book.

Continue on an extra sheet of paper.

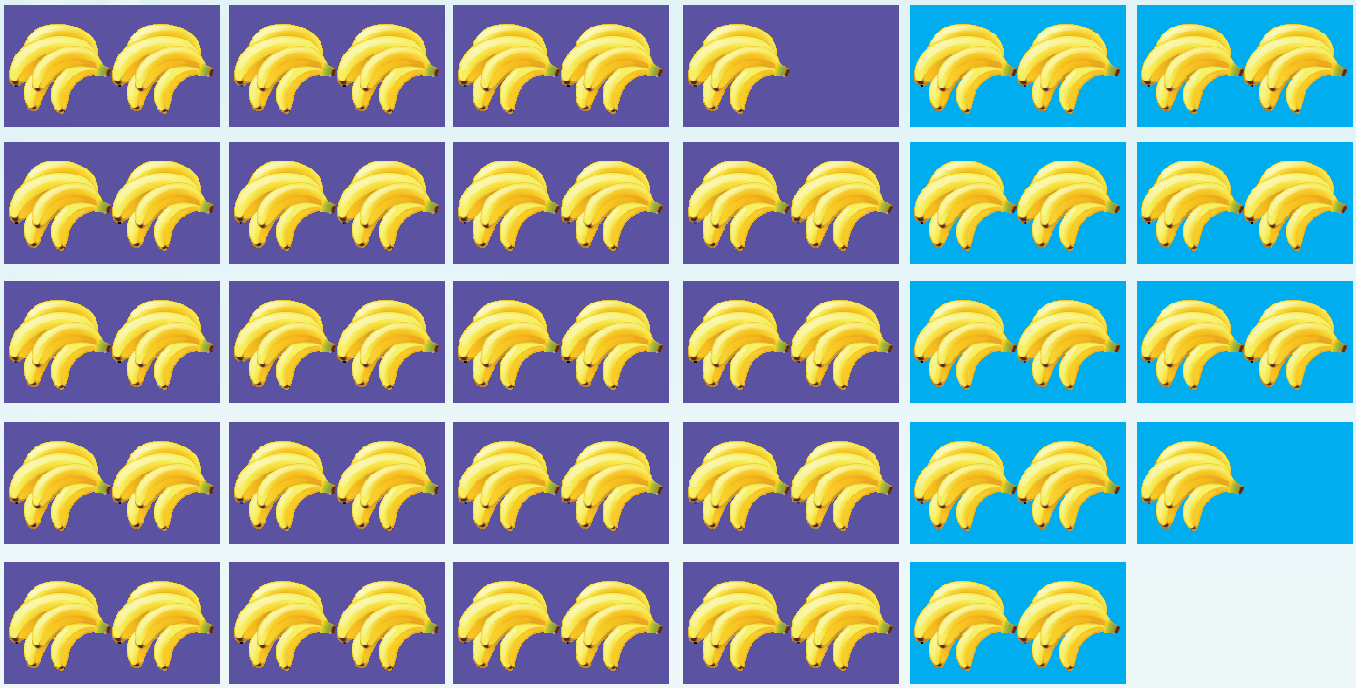
c. Jabu collects 2 389 bottle caps. Sindi collects 3 983 bottle caps. How many bottle caps did they collect altogether?

Continue on an extra sheet of paper.

continued ☛

Addition Problems continued!

2. Look at the pictures below and write an interesting addition word sum.



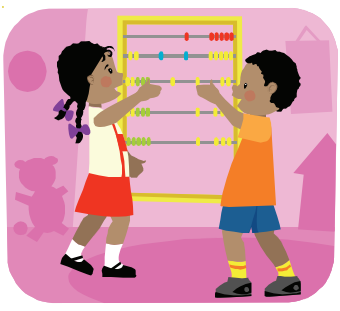
Continue on an extra sheet of paper.

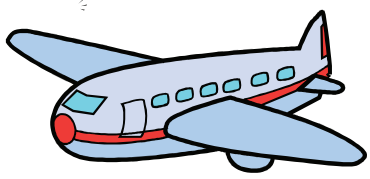
3. **Write an appropriate and interesting addition sum for: 6 594 and 3 485. Solve it.**

Continue on an extra sheet of paper.

Story sums

Write three of your own maths stories, rhymes or poems. Remember they should include numbers.







Compare your work with the work of a friend. Are they similar?

23 Subtraction

What is the difference between the numbers?

10	20	30	40	50	60	70	80	90	100
108	208	308	408	508	608	708	808	908	1008
150	250	350	450	550	650	750	850	950	1050
3	1 003	2 003	3 003	4 003	5 003	6 003	7 003	8 003	9 003
990	1 990	2 990	3 990	4 990	5 990	6 990	7 990	8 990	9 990

1. What number comes next?

a. 80, 70, 60, _____

b. 900, 800, 700, _____

c. 787, 687, 587, _____

d. 2 365, 2 355, 2 345, _____

e. 9 451, 8 451, 7 451, _____

f. 7 545, 6 545, 5 545, _____

2. Complete the table by subtracting from the given number:

Number	Subtract 1	Subtract 10	Subtract 100	Subtract 1 000
5 132				
1 874				
8 412				
4 657				
3 528				



3. Fill in the missing number:

a. 3 – ☐ = 0

b. 15 – ☐ = 10

c. 37 – ☐ = 30

d. 51 – ☐ = 50

e. 116 – ☐ =100

f. 150 – ☐ = 120

g. 568 – ☐ = 500

h. 984 – ☐ = 800

i. 1 952 – ☐ = 1 500

j. 9 407 – ☐ = 5 000

4. Complete the table by filling in the missing numbers.

		Complete up to the previous 10	Complete up to the previous 100.	Complete up to the previous 1 000.
a.	48	48 – ☐ = 40		
b.	325	325– ☐ = 320	325 – ☐ = 300	
c.	553	553 – ☐ = 550	553 – ☐ = 500	
d.	1 689	1 689 – ☐ = 1 680	1689 – ☐ = 1 600	1 689 – ☐ = 1 000
e.	6 584	6 584 – ☐ =	6 584 – ☐ =	6 584 – ☐ =

continued

23b Subtraction continued!

Examples:

Example 1:

4 328 – 3 145

= (4 000 – 3 000) + (300 – 100) + (20 – 40) + (8 – 5)

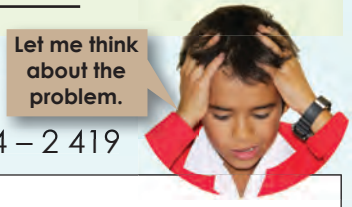
= (4 000 – 3 000) + (200 – 100) + (120 – 40) + (8 – 5)

= 1 000 + 100 + 80 + 3

= 1 183

Example 2:

	4	3	2	8	
–	3	1	4	5	
				3	(8 – 5)
			8	0	(120 – 40)
		1	0	0	(200 – 100)
+	1	0	0	0	(4 000 – 3 000)
	1	1	8	3	



5. Use both methods to solve the problem.

a. 3 812 – 2 708

b. 5 684 – 2 419

Continue on an extra sheet of paper.

c. 8 148 – 2 077

d. 2 632 – 1 284

Continue on an extra sheet of paper.

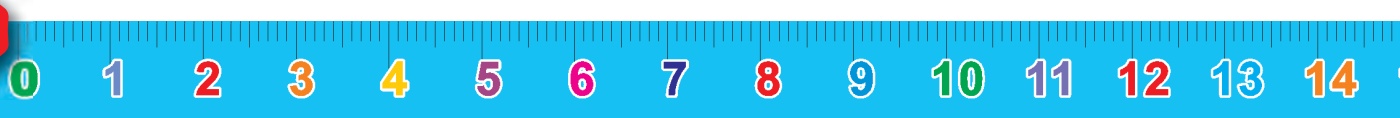
e. 9 657 – 3 489

f. 7 210 – 4 144

Continue on an extra sheet of paper.

g. What method do you prefer? Why?

Continue on an extra sheet of paper.



Examples:

Example 1:

7 424 – 1 888

= (7 000 – 1 000) + (400 – 800) + (20 – 80) + (4 – 8)

= (7 000 – 1 000) + (400 – 800) + (10 – 80) + (14 – 8)

= (7 000 – 1 000) + (300 – 800) + (110 – 80) + (14 – 8)

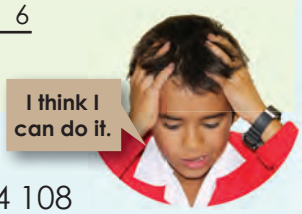
= (6 000 – 1 000) + (1 300 – 800) + (110 – 80) + (14 – 8)

= 5 000 + 500 + 30 + 6

= 5 536

Example 2:

	7	4	2	4	
–	1	8	8	8	
				6	(14 – 8)
			3	0	(110 – 80)
		5	0	0	(1 300 – 800)
+	5	0	0	0	(6 000 – 1 000)
	5	5	3	6	



6. Use both methods to solve the problem.

a. 3 767 – 2 459

Continue on an extra sheet of paper.

b. 8 715 – 4 108

Continue on an extra sheet of paper.

c. 6 449 – 5 655

Continue on an extra sheet of paper.

d. 9 564 – 6 295

Continue on an extra sheet of paper.

e. 7 359 – 2 399

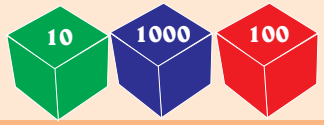
Continue on an extra sheet of paper.

f. 5 222 – 4 653

g. What method do you prefer? Why?

– What is the size of your number:

What you need:
- Use the 10s, 100s and 1 000s dice you made before.
- Piece of paper.



What to do:
- Individual game against a group or the class.
- Roll the 10s dice.
- Subtract the number landed on from the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Repeat the activity with the 100s and 1 000s dice.
- Learners check each others' subtraction sums.
- The winner is the person with the most correct answers.

3 784
4 278
5 734
6 234
7 342

24 Subtraction Problems

How fast can you answer these!

- **Subtract** 40 000 from 80 000.
- What is the **difference between** 7 800 and 5 400?
- **Minus** 90 000 and 55.
- **Decrease** 100 000 by 10 000.
- **Subtract** 450 **from** 19 000.
- **Reduce** 50 000 by 1 000.
- **Take** 15 000 **from** 45 000.
- **Take away** 25 000 **from** 100 000.



How did the blue words help you?

1. Solve the following problems. The pictures may guide you. Also look at the blue word.

a. Veronica has 780 postage stamps in her collection.

Lindiwe has 410 fewer stamps. How many stamps does Lindiwe have?







780 – 410

=

=

=

=

What word will help me to choose the operation?





b. James is selling stamps. He sold 4 387 on Monday. By the end of Tuesday he had sold 8 000 stamps. How many stamps did he sell on Tuesday?

i. What picture do you see when you think about this problem? Draw it.



Continue on an extra sheet of paper.

ii. What operation should you use?

Continue on an extra sheet of paper.

iii. Solve the problem. Write it down in your workbook.

Continue on an extra sheet of paper.

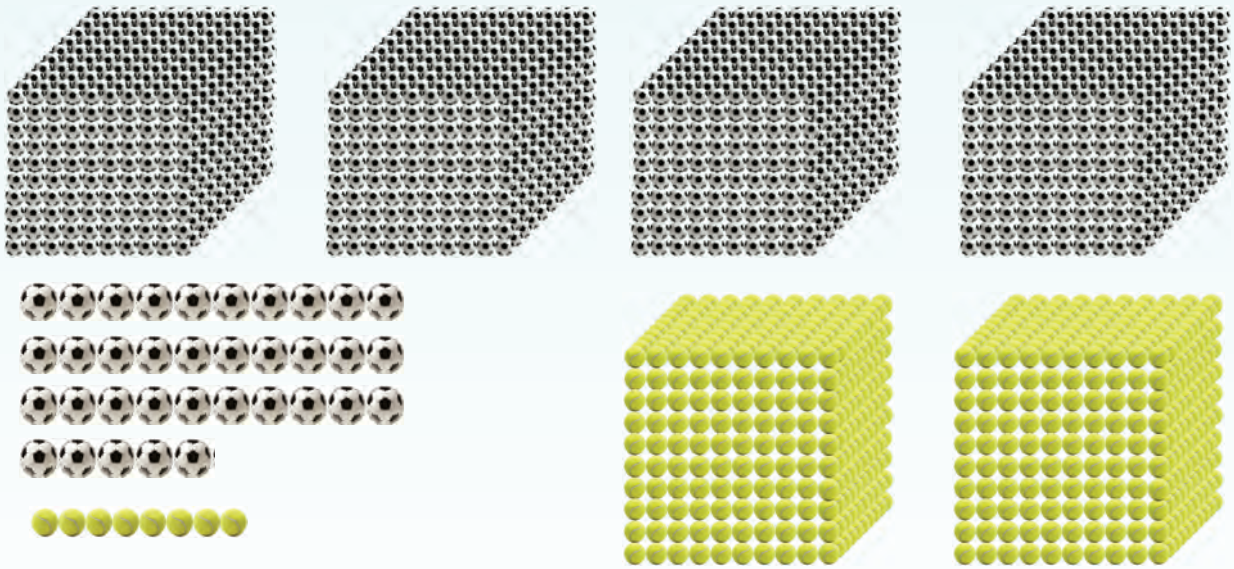
continued

Subtraction Problems continued!

c. My aunt makes jewellery. She buys 9 525 beads. She uses 4 250 to make some jewellery. How many beads does she have left?

Continue on an extra sheet of paper.

2. Look at the pictures below of soccer balls and tennis balls and write an interesting subtraction word sum.



Continue on an extra sheet of paper.

3. **Write an appropriate and interesting word sum for: 45 879 and 38 238. Solve it.**

Continue on an extra sheet of paper.

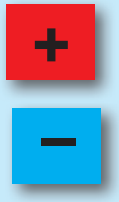
At the party – Make up your own story



25 Addition and Subtraction

How fast can you answer these!

- **Add** 6 000 and 800.
- **Subtract** 600 from 4 000.
- 9 000 **plus** 330 is …
- The **sum** of 2 500 **and** 5 500 is …
- **Take** 3 000 **from** 7 000.
- **Decrease** 5 500 by 2 300.
- **Increase** 1500 by 2 800.
- 1 250 **and** 4 250 are …



Use the colours to help you to solve the word sums.



1. Complete the table below.

	Add 300	Subtract 600	Add 4 000	Subtract 3 000
3 500				
6 200				
5 820				
4 650				
5 999				

2. Answer the following questions:

a. What is the opposite of + ? _____

b. What is the opposite of ÷ ? _____

3. Calculate the following.

a. 7 544 + 1 378 =

b. 4 245 + 1 996 =

Continue on an extra sheet of paper.

c. 8 678 – 3 482 =

d. 3 124 – 1 657 =

Continue on an extra sheet of paper.

4. Check your answers for each of the above calculations, using the opposite operation.

Continue on an extra sheet of paper.

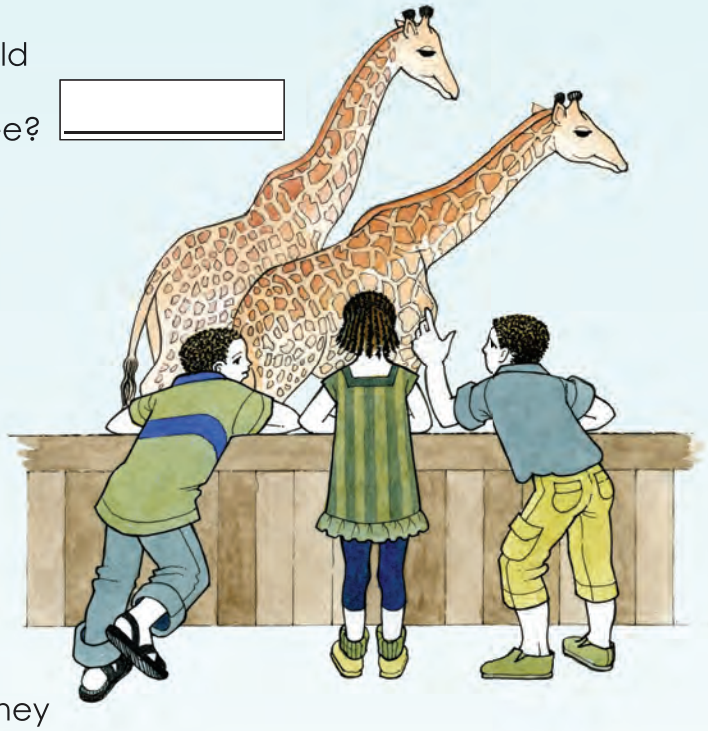
continued ☛

5. Solve the following problems:

a. Suzy and her brothers were counting animals at the zoo. Suzy counted 234 animals and her brother Thabo counted 1 004 birds. Their younger brother Andile counted 538 animals.

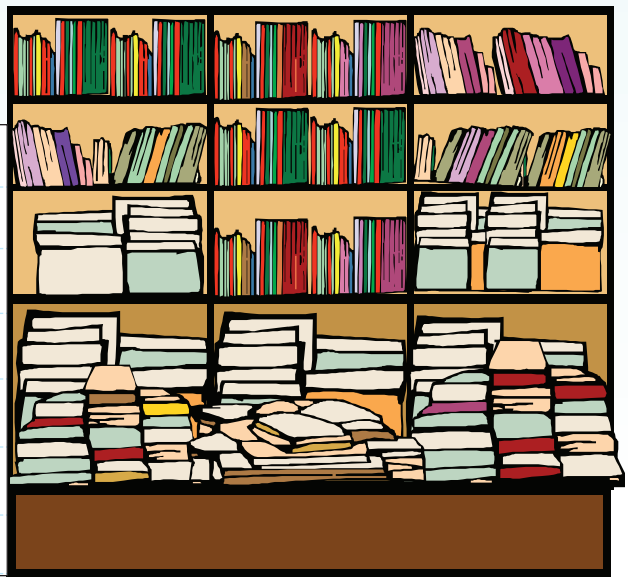
i. How many animals were counted in all? _____

ii. The guide told them that they could expect to see 2 000 animals. How many animals did they not see? _____



b. A book store had 1 250 books. They bought another 1 200 books. Then they had a sale and sold 1625 books.

i. How many books were on the shelves when the sale started?



Continue on an extra sheet of paper.

ii. How many books were left on the shelves after the sale?

Continue on an extra sheet of paper.

iii. If the book store sells another 500 books, how many books will be left?

Continue on an extra sheet of paper.

Coloured numbers



2 000	5 000	750	1 750
100	4 500	8 000	200
3 250	2 500	1 200	3 500
125	1 500	7 000	4 000

What to do:

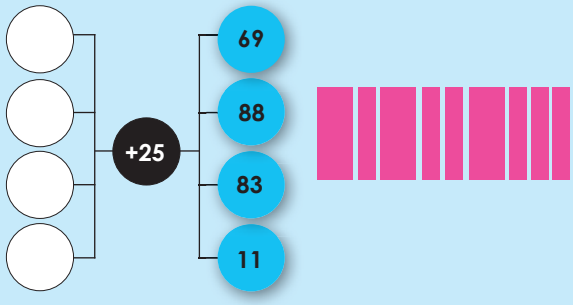
- Play in pairs.
- The first player will say: "Add red numbers". Then the second player can take any two red numbers and add them. If the player is correct, he or she will get one point.
- The second player will say: "Subtract yellow numbers". Then the first player makes a subtraction sum with any two yellow numbers.
- Carry on playing. The first person with a score of 10 is the winner.

26 More Patterns

What is a pattern? Look at the examples to guide you.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

12, 24, 36, 28, …



1. Which of these are patterns? Answer with reference to what you said a pattern is.

a. 12, 24, 36, 48, … _____

b. 9, 3, 11, 13, … _____

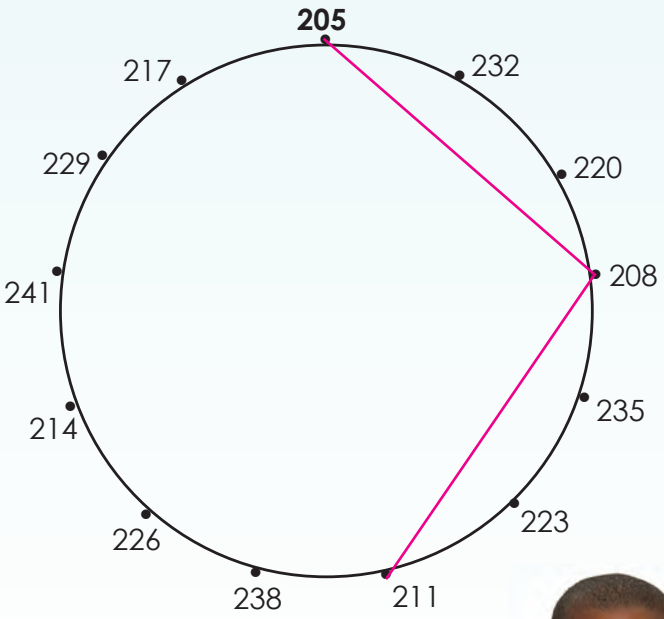
c. 2, 4, 12, 14, 22, 24, … _____

d.  _____

e.  _____

f.  _____

2. Complete the pattern on the circle. We have started it for you.



a. Describe the pattern.

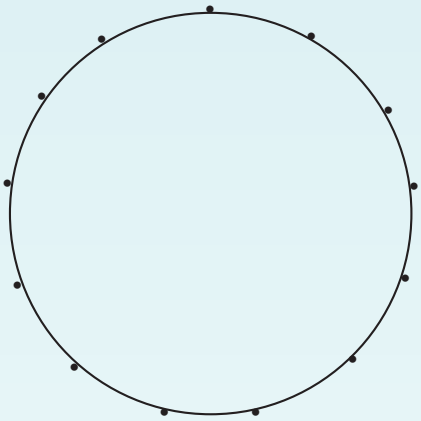


Use colour pencils to make your pattern even more beautiful.

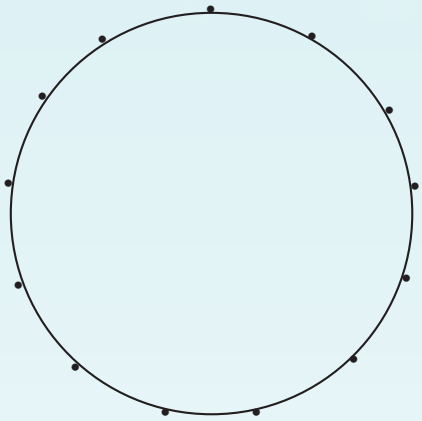
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

3. Make two of your own patterns. They should be similar to the pattern in question 2.

a.



b.



c. Describe the patterns above.

4. What is the next number?

a. 2, 3, 5, 8, _____

b. 100, 81, 64, _____

c. 1, 4, 9, 16, 25, _____

d. 3, 9, 81, _____

Pattern fun …

What will the next five rows in this pattern be?

1

1+2+1

1+2+3+2+1

1+2+3+4+3+2+1

1+2+3+4+5+4+3+2+1

1+2+3+4+5+6+5+4+3+2+1

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

27 Grouping and Sharing Problems

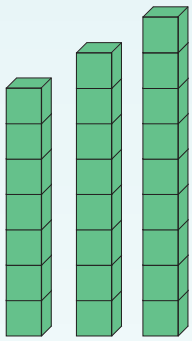
Thinking in groups:

We have 18 apples.
Can you move 1 apple to make 3 equal groups?



1. How many objects do you need to move to make 3 equal groups? Complete the following using the example given.

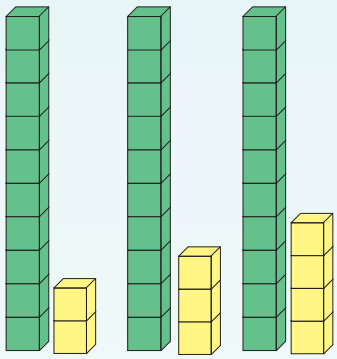
a. 7 + 8 + 9 = 24



i. Addition sum:
8 + 8 + 8 = 24

ii. Multiplication sum:
8 x 3 = 24

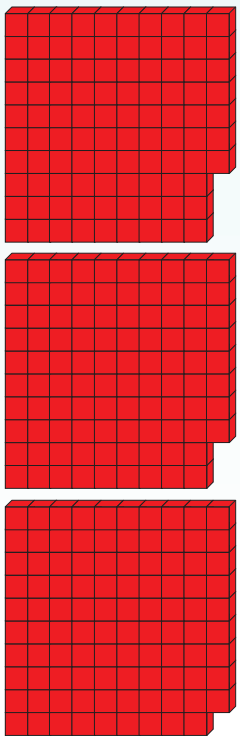
b. 12 + 13 + 14 = _____



i. Addition sum: _____

ii. Multiplication sum: _____

c. 97 + 98 + 99 = _____



i. Addition sum: _____

ii. Multiplication sum: _____

d. 2 000 + 3 000 + 4 000 = _____

2 000

3 000

4 000

i. Addition sum: _____

ii. Multiplication sum: _____

2. What can you do to each group of numbers to make them equal? Write down three sums to show what you did.

i. 3, 4, 5

a. 3 + 1 = 4

b. 4 + 0 = 4

c. 5 – 1 = 4

ii. 20, 30, 40

a.

b.

c.

iii. 600, 700, 800

a.

b.

c.

iv. 4, 6, 8

a.

b.

c.

v. 40, 50, 60

a.

b.

c.

vi. 100, 200, 300

a.

b.

c.

vii. 80, 90, 100

a.

b.

c.

viii. 700, 800, 900

a.

b.

c.

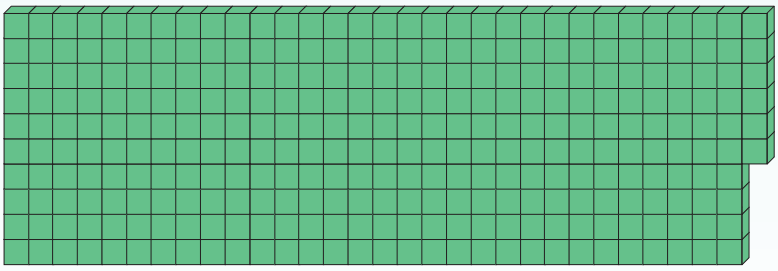
ix. 4 000, 5 000, 6 000

a.

b.

c.

3. Break this block into 3 equal parts.



i. Now write an addition sum:

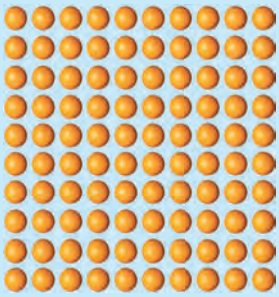
ii. Now write a multiplication sum:

continued ☛

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

27b Grouping and Sharing Problems continued!

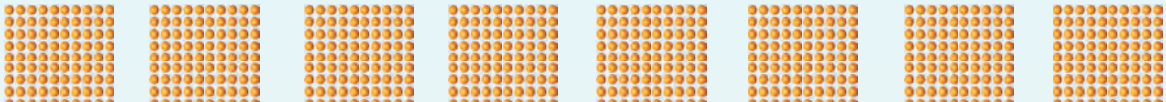
What does it mean to share? How fast can you share the oranges between the children?

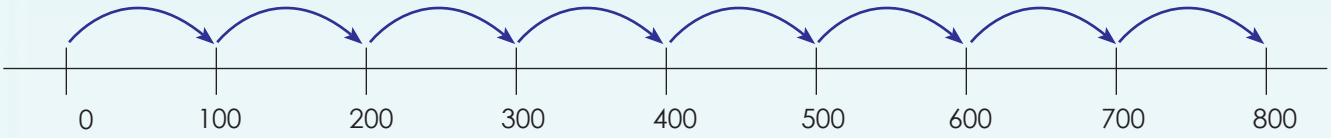




1. Use the number line to answer the questions.

a.



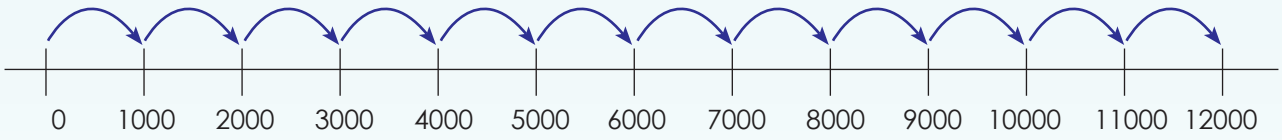


i. How many groups of a hundred do you count? _____

ii. You can write it as: _____ x _____

iii. If I share 800 by 8, what will I get? _____

b.

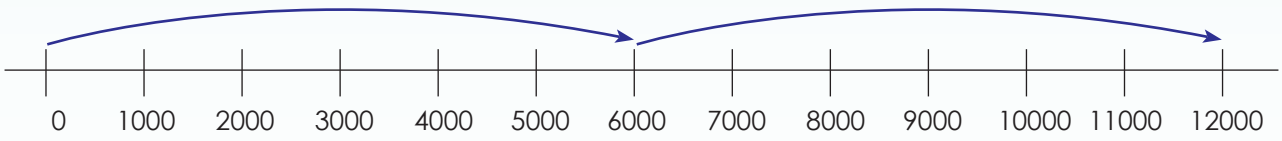


i. How many groups of a thousand do you count? _____

ii. You can write it as: _____ x _____

iii. If I share 1 200 by 10, what will I get? _____

c.



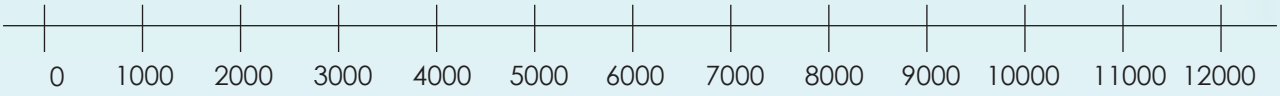
i. How many groups of six thousand do you count? _____

ii. You can write it as: _____ x _____

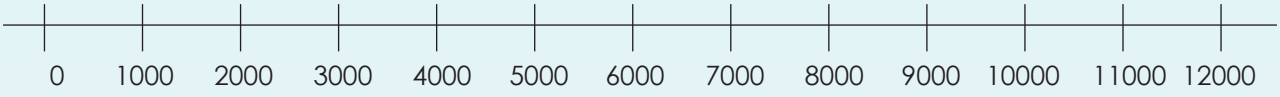
iii. If I share 8000 by 8, what will I get? _____

2. Use the number lines to show the following:

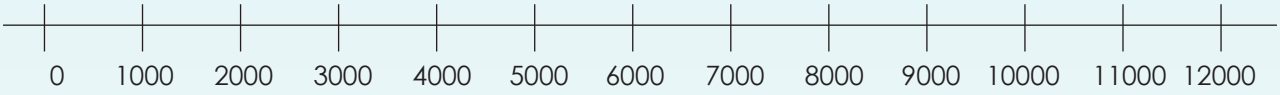
a. Share 12 000 between 6.



b. Share 12 000 between 4.



c. Share 12 000 between 3.



3. Which of these fruits could I share equally?

Fruit	Number	Shared between	Each get	Remainder
	2 000 apples	10	200	0
	2 800 oranges	100		
	3 700 bananas	100		
	5 250 naartjies	10		
	9 487 pears	100		

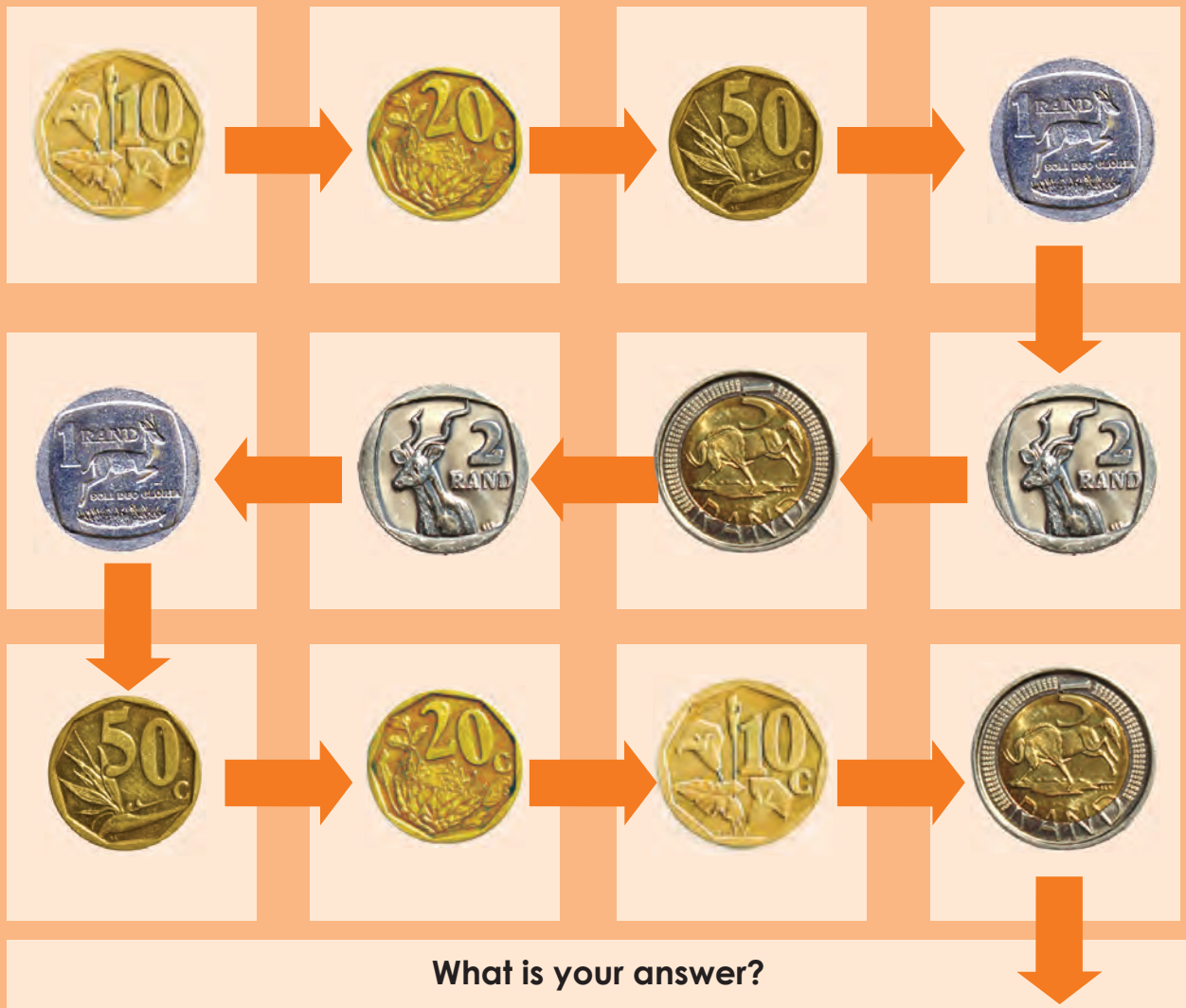
continued ☛

Grouping and Sharing Problems

continued!

How fast can you add these?

Follow the path and add the coins.



What is your answer?



Money everywehere





a.m. – any time in the morning between midnight and midday.
Example:

01:00	02:00	03:00	04:00	05:00	06:00
07:00	08:00	09:00	10:00	11:00	12:00

p.m. – any time in the afternoon or evening that is between midday and midnight.
Example:

13:00	14:00	15:00	16:00	17:00	18:00
19:00	20:00	21:00	22:00	23:00	24:00

1. Write down the times shown on the clock:







a. 2 a.m. or 2 p.m. b. ____ a.m. or ____ p.m. c. ____ a.m. or ____ p.m. d. ____ a.m. or ____ p.m. e. ____ a.m. or ____ p.m.







f. 2 a.m. g. ____ h. ____ i. 5 p.m. j. ____

2. Write down the times shown on the clock:







a. ____ a.m. or ____ p.m. b. ____ a.m. or ____ p.m. c. ____ a.m. or ____ p.m. d. ____ a.m. or ____ p.m. e. ____ a.m. or ____ p.m.







f. ____ g. ____ h. ____ i. ____ j. ____

3. Write down the times shown on the clock:



a. _____ a.m.
or _____ p.m.



b. _____ a.m.
or _____ p.m.



c. _____ a.m.
or _____ p.m.



d. _____ a.m.
or _____ p.m.



e. _____ a.m.
or _____ p.m.



f. _____



g. _____



h. _____



i. _____



j. _____

4. Draw the clock hands to show the following times on the clocks:



a. 1 p.m.



b. 3 a.m.



c. 8 a.m.



d. 11 p.m.



e. 6 p.m.



f. 03:45



g. 09:26



h. 16:38



i. 12:51



j. 00:23



k. 01:25:03



l. 08:41:44



m. 16:50:57



n. 20:19:32

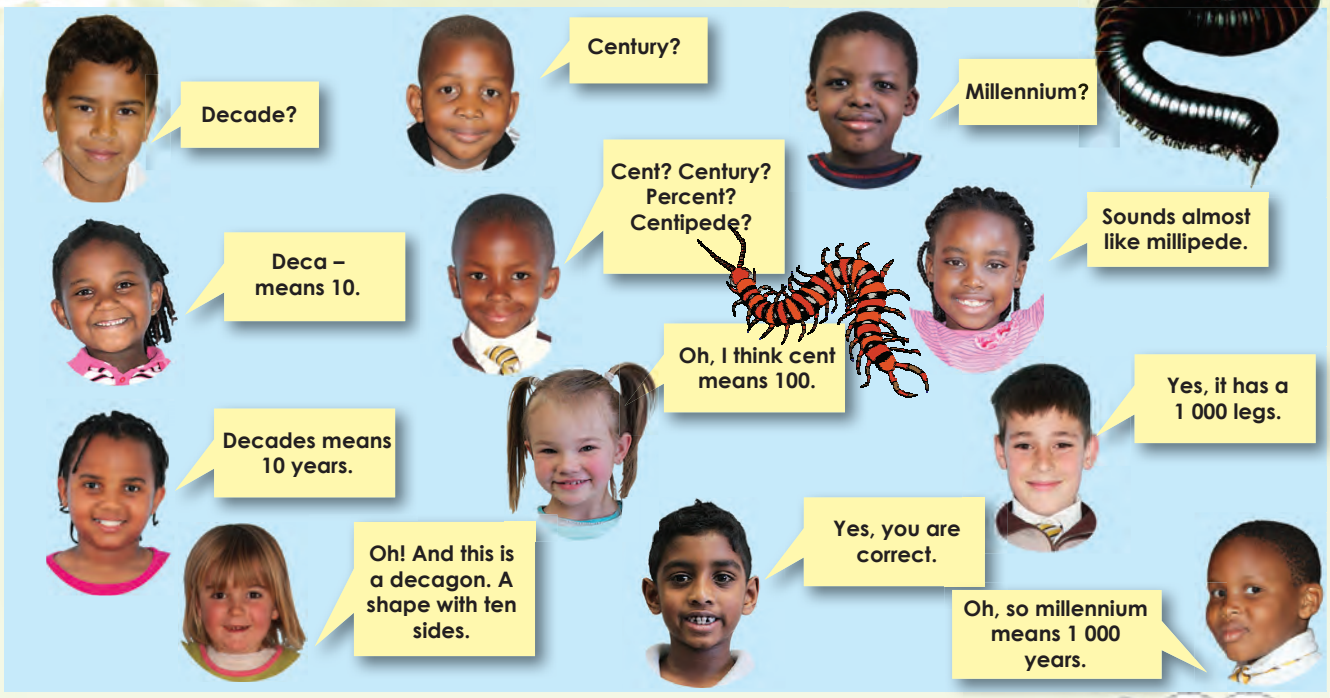


o. 23:37:59

Find in magazines

Find five pictures of watches in magazines, newspapers and advertisements.
Say why you would buy or not buy it.

29 More time

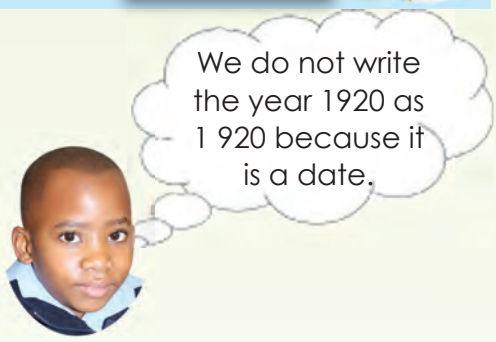


1. How many years are there in a:

a. Decade? _____

b. Century? _____

c. Millennium? _____



2. Answer the following questions:

a. Let us count in decades.

1 910, 1 920, 1 930, _____, _____, _____, _____, _____, _____, _____

b. Let us count in centuries.

1 100, 1 200, 1 300, _____, _____, _____, _____, _____, _____, _____

c. What millennium will come next?

1 000, 2 000, _____

3. How many:

a. Decades are there in a century? _____

b. Centuries are there in a millennium? _____

c. Decades are there in a millennium? _____

4. Complete the following:

a. 2 decades = _____ years

b. 3 centuries = _____ years

c. 3 millennia = _____ years

d. 9 centuries = _____ years

e. 2 millennia = _____ years

f. 4 decades= _____ years

g. 6 centuries = _____ years

h. 5 centuries = _____ years

i. 7 decades = _____ years

j. 4 millennia = _____ years

k. 9 millennia = _____ years

l. 1½ centuries = _____ years

m. 2½ millennia = _____ years

n. 8½ decades = _____ years

5. Complete the following. The example will guide you.

a. 1995 = 1 millennium, 9 centuries, 9 decades, 5 years

b. 1852 = _____ , _____ , _____ , _____

c. 1603 = _____ , _____ , _____ , _____

d. 1999 = _____ , _____ , _____ , _____

e. 2010 = _____ , _____ , _____ , _____

6. What does "twenty ten" mean? _____

7. What does "He was born in the 20th century" mean? _____

8. Why did people all over the world celebrate in 2000? _____

How old am I?



In which year were you born?

How old are you?



Write your age in:

millennia
centuries
decades
years

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

30 Data

Discuss: Do you think the children in this class eat healthy food?



1. Complete the table below on the food your prefer.

Breakfast	Tick which of these you eat most often for these meals:
Cooked porridge	
Cereal with added sugar	
Cereal without added sugar	
Bread	
Fruit	
Yoghurt	
I don't eat breakfast	
Bacon and eggs	
Lunch	
Junk food	
Healthy sandwich	
Cooked meal	
Supper	
Junk food	
Healthy sandwich	
Cooked meal	

2. Do you think you eat healthy food?





3. You asked all the children in your class the same questions. These were their responses. You still need to add up the tallies. Complete the last column.

Breakfast	Tick whether you eat any of these things normally:	Total
Cooked porridge	𝍸 𝍸 /	11
Cereal with added sugar	𝍸	
Cereal without added sugar	///	
Bread	///	
Fruit	𝍸	
Yoghurt	//	
I don't eat breakfast	𝍸 𝍸 ///	
Bacon and eggs	/	
Lunch		
Junk food	////	
Healthy sandwich	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	
Cooked meal	𝍸 ///	
Supper		
Junk food	𝍸 𝍸	
Healthy sandwich	𝍸 /	
Cooked meal	𝍸 𝍸 𝍸 𝍸 𝍸 /	

a. What is the most common breakfast? _____

b. What is the least common breakfast? _____

c. What is the most common lunch? _____.

d. Do most children eat a healthy or unhealthy lunch? _____

Why? _____

e. How many children eat a cooked meal for supper? _____

f. How many children don't eat breakfast? _____

Do you think it is healthy? _____ Why? _____

g. Is bacon and eggs a favourite meal? _____ Why or why not? _____

_____

Tally competition …



In pairs see who can count the tallies the fastest.

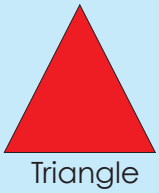
𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

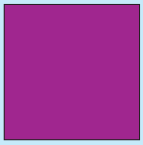
𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

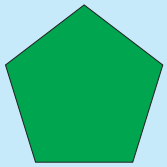
𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

31 Polygons

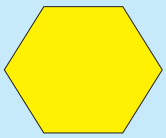
What is a polygon? Are all of these polygons? Are these the only polygons there are?

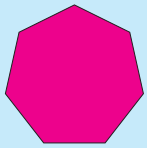

Triangle

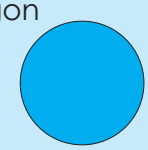

Square


Pentagon

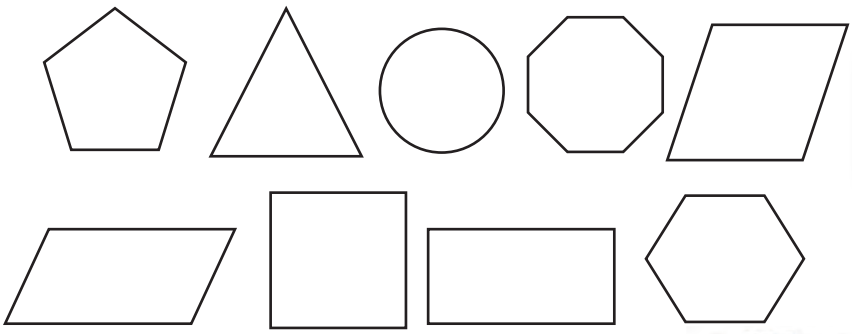

Rectangle


Hexagon


Heptagon


Circle

1. Colour in all the quadrilaterals.





2. Answer the following:

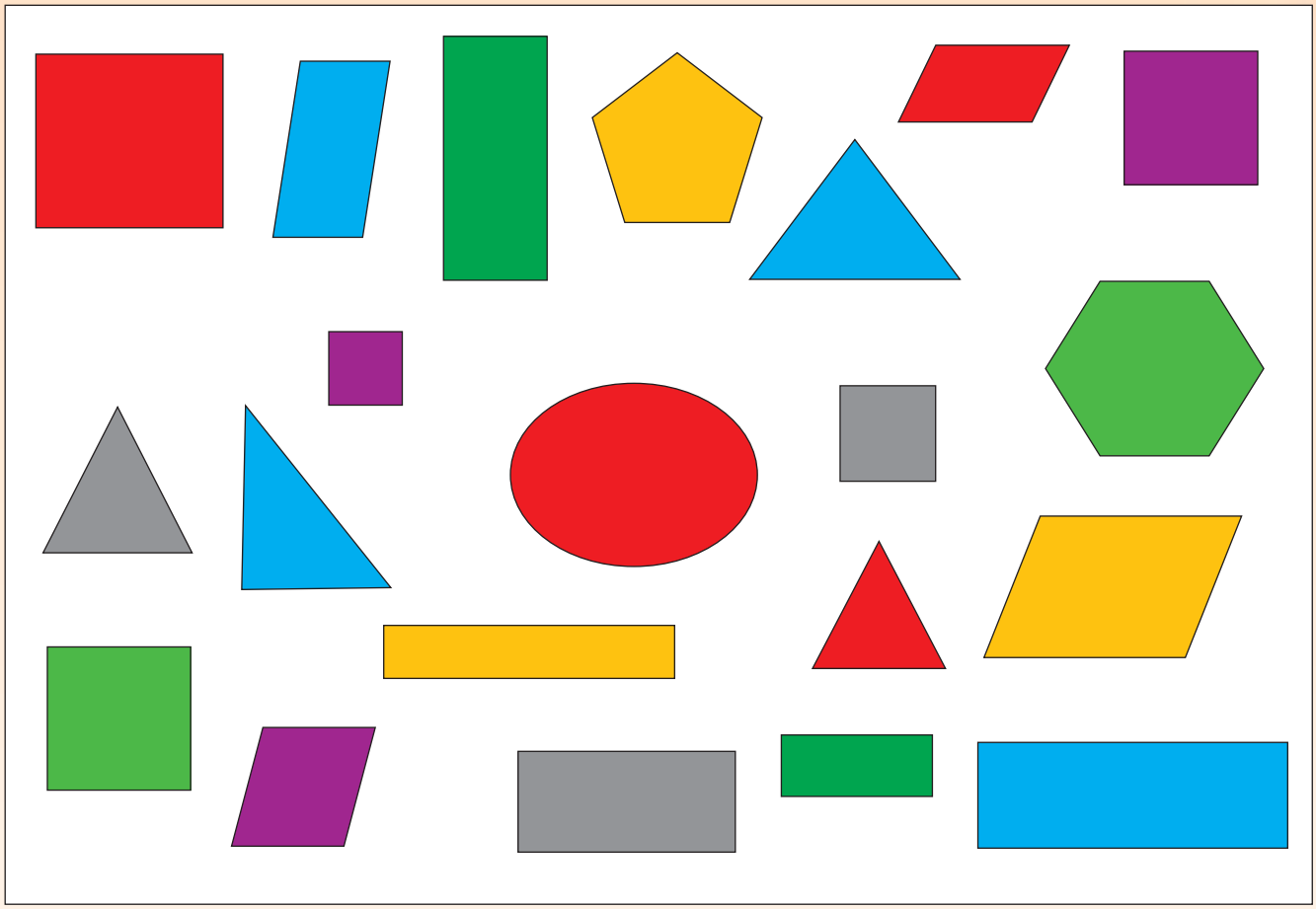




a. Is a rectangle a quadrilateral? Why?

b. Is a square a quadrilateral? Why?

3. Identify all the squares and rectangles by writing the name underneath the shape.



4. Answer the following:

a. What is the same about squares and rectangles?

_____

b. What are the differences between squares and rectangles?

_____

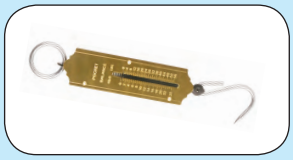
Shape patterns

Draw a pattern using rectangles and squares only.

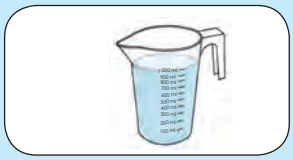


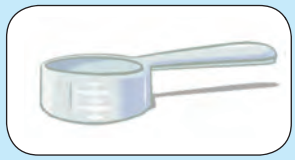
32 Capacity

Which measuring instrument will you use to weigh objects?










1. Colour the measuring cups and jugs that will give the total in the block on the left.

a. 1 *l*



b. 4 *l*



c. 1,5 *l*



d. 2,5 *l*



e. 6,5 *l*



2. I can write:

a. 1 litre 500 ml as 1,5 litre

b. 2 litre 300 ml as _____

c. 4 litre 100 ml as _____

d. 7 litre 300 ml as _____

e. 5 litre 150 ml as _____

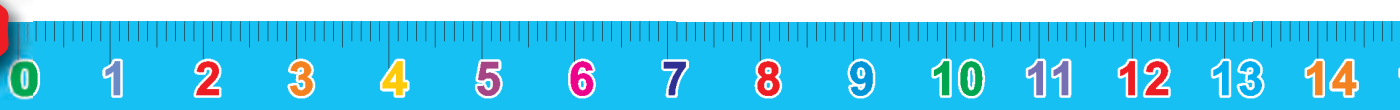
f. 6 litre 250 ml as _____

g. 8 litre 125 ml as _____

h. 9 litre 725 ml as _____

i. 10 litre 367 ml as _____

j. 12 litre 426 ml as _____



3. Write the following as *l* and ml.

a. 3,5 *l* = 3 *l* 500 ml

b. 2,7 *l* = _____

c. 9,2 *l* = _____

d. 4,4 *l* = _____

e. 7,250 *l* = _____

f. 8,320 *l* = _____

g. 1,725 *l* = _____

h. 10,76 *l* = _____

i. 9,25 *l* = _____

j. 11,15 *l* = _____

4. Joan used 2,5 *l* of water for making coffee, 60,5 *l* for doing her washing and 3,5 *l* or washing dishes. How much water did she use altogether?

Continue on an extra sheet of paper.

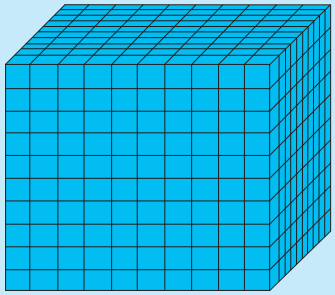
Millimetre fun . . .

Collect some junk mail. Find items where measurements are given in millilitres and litre.



15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

How many of these blocks do you need to give you a total of 20 000 small cubes?



1. Complete the following:

a. 10 000 + 1 000 + 800 + 40 + 2 = _____

b. 10 000 + 5 000 + 300 + 60 + 9 = _____

c. 10 000 + 4 000 + 700 + 6 = _____

d. 10 000 + 8 000 + 60 + 7 = _____

e. 10 000 + 3 = _____

2. Write the number in the correct column:

		Ten thousands	Thousands	Hundreds	Tens	Units
a.	15 519					
b.	14 901					
c.	18 007					
d.	10 040					
e.	10 003					

3. **Write the numbers in question 2 in words.**

4. **Complete the following using the first question to guide you.**

a. 13 847 = 1 ten thousands + 3 thousands + 8 hundreds + 4 tens + 7 units

b. 9 745 = _____

c. 11 348 = _____

d. 15 721 = _____

e. 19 090 = _____

continued ☛

5. Write the numbers in question 4 in words.

Continue on an extra sheet of paper.

6. Arrange the numbers from the smallest to the biggest.

a. 15 147 , 15 471, 15 174 , 10 650 _____

b. 10 231, 10 132 , 10 123 , 10 213 _____

c. 12 541, 12 145, 12 154 , 12 415 _____

d. 18 639 , 18 369 , 18 693 , 18 396 _____

e. 10 505 , 10 055 , 10 550 , 10 555 _____

7. Fill in < or >.

a. 9 248 ____ 9 284

b. 10 320 ____ 10 230

c. 11 121 ____ 11 112

d. 12 041 ____ 12 401

e. 13 514 ____ 14 514

f. 11 212 ____ 12 121

g. 15 145 ____ 15 154

h. 3 798 ____ 3 788

i. 19 987 ____ 19 978

j. 16 616 ____ 16 166

8. What is the value of the underlined digit?

a. 9 548 _____

b. 14 874 _____

c. 10 587 _____

d. 16 354 _____

e. 18 201 _____

f. 14 008 _____

9. Complete the following:



a. Use each digit once, make the smallest 5–digit number: _____

b. Use each digit once, make the largest 5–digit number: _____

c. You can use a digit twice, make the smallest 5–digit number: _____

d. You can use a digit twice, make the largest 5–digit number: _____

All about numbers

What you need:
Newspaper.



- Find at least five, 5–digit numbers in a newspaper.
- What is the meaning of the 5–digit number?

34 Rounding off

Look at the symbols below and describe them.



When we want to say 6 + 5 is equal to 11, we use the symbol =

=



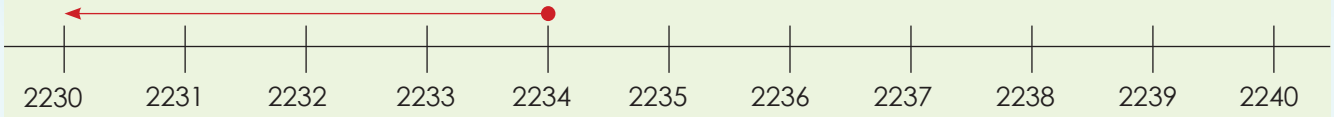
When we want to say 6 rounded off to the nearest 10 we use the symbol ≈

≈

Rounding off to the nearest ten.

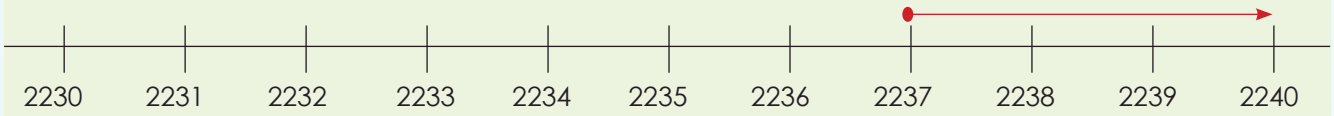
Round off the numbers that end in a digit from **1** to **4** to the previous (lower) ten.

Example: 2 234 rounded off to the nearest ten is 2 230.



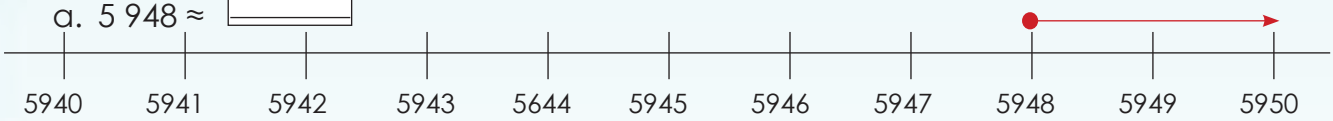
Round off numbers that end in a digit from **5** to **9** to the next (higher) ten.

Example: 2 237 rounded off to the nearest ten would be 2 240.

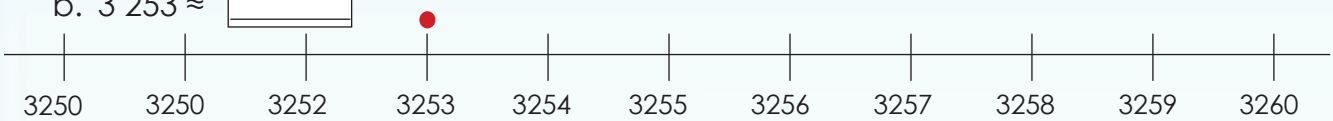


1. Round the following numbers off to the <u>nearest ten</u> using the number lines provided.

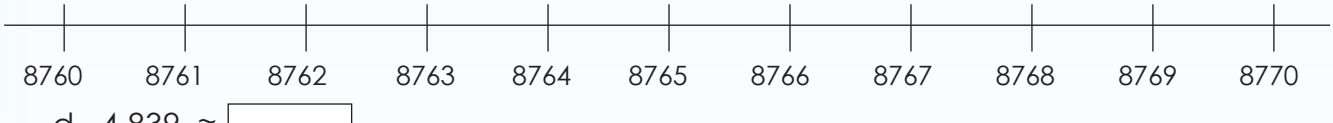
a. 5 948 ≈ ____



b. 3 253 ≈ ____



c. 8 762 ≈ ____



d. 4 839 ≈ ____



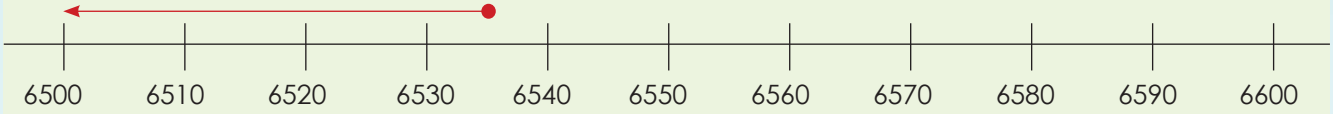
e. 6 744 ≈ ____



Rounding off to the nearest hundred.

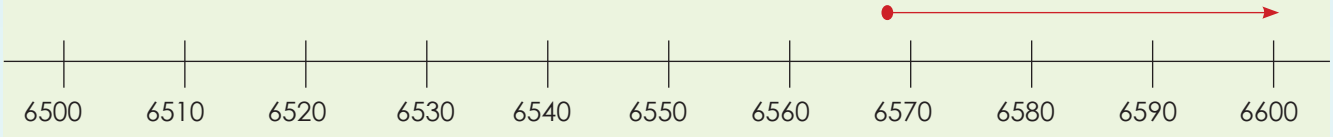
If the tens digit is a 0, 1, 2, 3 or 4, round off the number to the previous (lower) hundred.

Example: 6 535 rounded off to the nearest hundred would be 6 500.



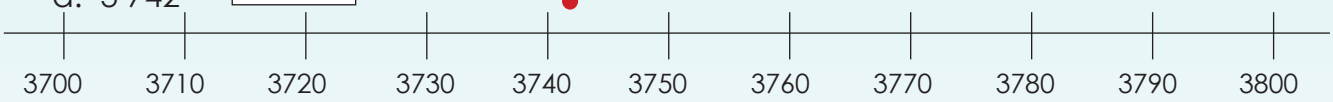
If the tens digit is a 5, 6, 7, 8 or 9, round off the number to the next (higher) hundred.

Example: 6 5**6**7 rounded off to the nearest hundred would be 6 600.

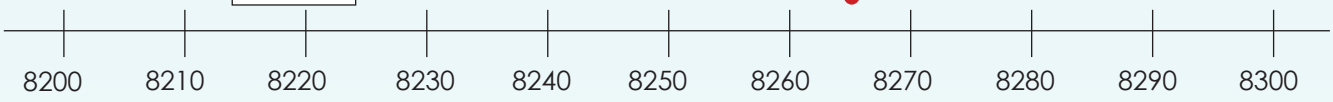


2. Round the following numbers off to the <u>nearest hundred</u> using the number lines provided.

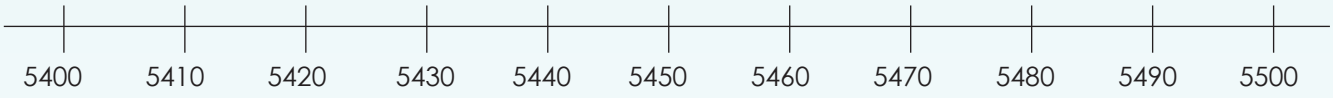
a. 3 742 ≈ ____



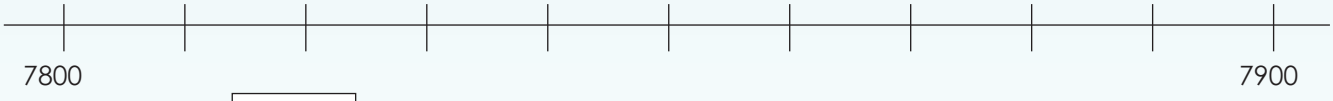
b. 8 265 ≈ ____



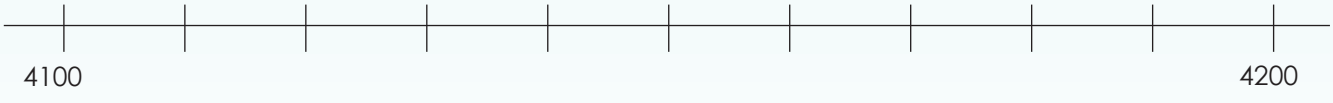
c. 5 419 ≈ ____



d. 7 878 ≈ ____

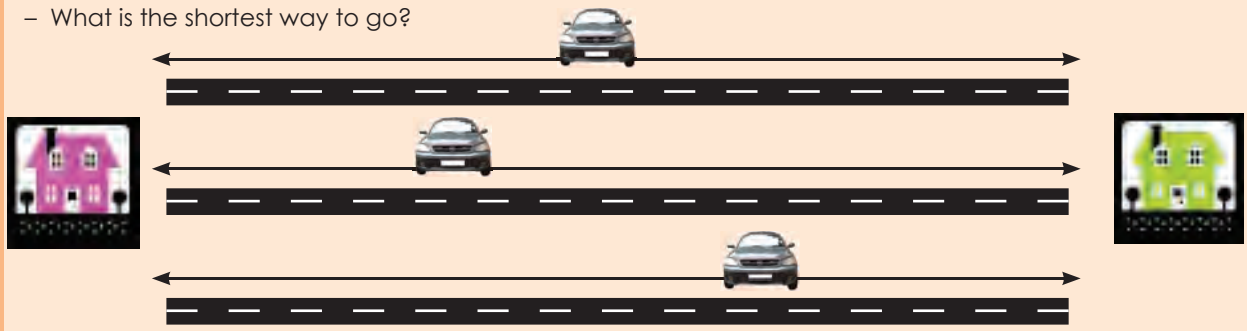


e. 4 123 ≈ ____



Just remember …

– What is the shortest way to go?



35 Rounding off to the nearest 5

0	1	2	3	4	5	6	7	8	9	10

Look at the numbers with grey backgrounds.

Where does the number 1 lie on this row? Which grey number is it closest to? Look at the numbers 2 , 3, 4, 6, 7, 8, 9.

Is 1 closer to 0 or 5?
Is 2 closer to 0 or 5?
Is 3 closer to 0 or 5?
Is 4 closer to 0 or 5?
Is 6 closer to 5 or 10?
Is 7 closer to 5 or 10?
Is 8 closer to 5 or 10?
Is 9 closer to 5 or 10?



1 is closer to 0 than 5.



9 is closer to 10 than 5.

1. Round the following numbers off to the nearest 5.

10	11	12	13	14	15	16	17	18	19	20

a. **12.** Is it closer to 10 or 15? ____ **12** ≈ ____

b. **14.** Is it closer to 10 or ____ ? ____ **14** ≈ ____

c. **11.** Is it closer to ____ or ____ ? ____ **11** ≈ ____

d. **18.** Is it closer to 15 or ____ ? ____ **18** ≈ ____

e. **16.** Is it closer to ____ or ____ ? ____ **16** ≈ ____



140	141	142	143	144	145	146	147	148	149	150

f. **148.** Is it closer to ____ or ____ ? ____ **148** ≈ ____

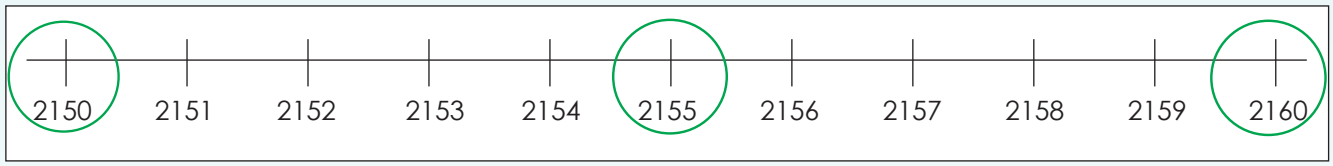
g. **143.** Is it closer to ____ or ____ ? ____ **143** ≈ ____

h. **147.** Is it closer to ____ or ____ ? ____ **147** ≈ ____

i. **144.** Is it closer to ____ or ____ ? ____ **144** ≈ ____

j. **149.** Is it closer to ____ or ____ ? ____ **149** ≈ ____

2. Use the number line to round off the numbers to the nearest 5.



a. 2 152 ≈ ____

b. 2 154 ≈ ____

c. 2 159 ≈ ____

d. 2 153 ≈ ____

e. 2 156 ≈ ____

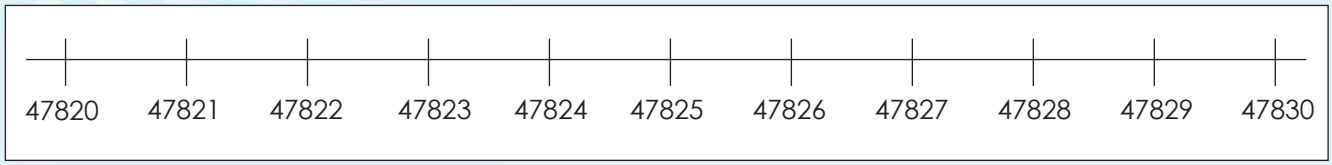
f. 2 157 ≈ ____

g. 2 158 ≈ ____

continued ☛

Rounding off to the nearest 5 continued

3. Use the number line to round off the numbers to the nearest 5.



a. 47 826 ≈ _____

b. 47 829 ≈ _____

c. 47 827 ≈ _____

d. 47 822 ≈ _____

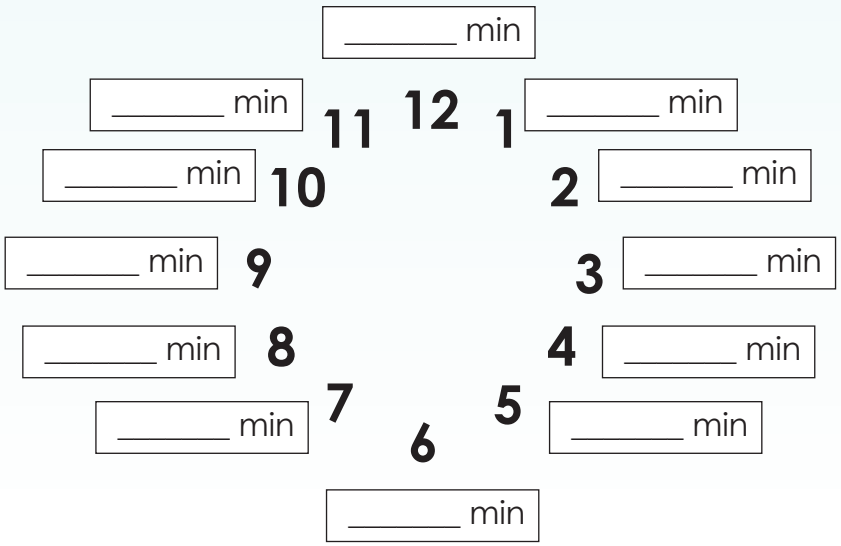
e. 47 823 ≈ _____

f. 47 821 ≈ _____

g. 47 828 ≈ _____

4. Look at the clock and answer the questions.

a. Count in minutes: 5 min, 10 min, 15 min, ...



b. What minute numbers will I find between 5 minutes and 10 minutes? _____

c. What minute numbers will I find between 35 minutes and 40 minutes? _____

d. What minute numbers will I find between 50 minutes and 55 minutes? _____

e. Round off the following to the nearest five minutes:

i. 14 minutes ≈ _____

ii. 27 minutes ≈ _____

iii. 43 minutes ≈ _____

iv. 51 minutes ≈ _____

v. 19 minutes ≈ _____

vi. 36 minutes ≈ _____

How fast can you round off ?

Colour in the correct answer.

Round off 78 to the nearest 5.

79	75	87
57	78	77
80	76	70

Round off 99 to the nearest 5.

98	99	10
9	90	100
95	97	59

Round off 126 to the nearest 5.

130	100	120
128	127	162
126	200	125

Round off 234 to the nearest 5.

200	230	250
236	233	235
243	234	240

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

36 Completing numbers

Quick recall

48 + ☐ = 100	72 + ☐ = 100	26 + ☐ = 100	92 + ☐ = 100
52 + ☐ = 100	32 + ☐ = 100	48 + ☐ = 100	47 + ☐ = 100
86 + ☐ = 100	15 + ☐ = 100	12 + ☐ = 100	61 + ☐ = 100
45 + ☐ = 100	65 + ☐ = 100	87 + ☐ = 100	13 + ☐ = 100
74 + ☐ = 100	39 + ☐ = 100	55 + ☐ = 100	44 + ☐ = 100

1. Calculate the missing number as quickly as you can.

a. 150 + ☐ = 200
b. 180 + ☐ = 200
c. 330 + ☐ = 400
d. 310 + ☐ = 400
e. 660 + ☐ = 700
f. 540 + ☐ = 600
g. 870 + ☐ = 900
h. 290 + ☐ = 300
i. 920 + ☐ = 1 000
j. 80 + ☐ = 100

2. Calculate the missing number:

a. 145 + ☐ = 200
b. 215 + ☐ = 300
c. 320 + ☐ = 400
d. 885 + ☐ = 900
e. 255 + ☐ = 300
f. 575 + ☐ = 600
g. 905 + ☐ = 1 000
h. 365 + ☐ = 400
i. 775 + ☐ = 800
j. 735 + ☐ = 800

3. Calculate the missing number:

a. 153 + ☐ = 200
b. 178 + ☐ = 200
c. 242 + ☐ = 300
d. 357 + ☐ = 400
e. 439 + ☐ = 500
f. 474 + ☐ = 500
g. 512 + ☐ = 600
h. 609 + ☐ = 700
i. 916 + ☐ = 1 000
j. 733 + ☐ = 800

4. Calculate the missing number as quickly as you can.

a. 1 600 + ☐ = 2 000
b. 2 300 + ☐ = 3 000
c. 3 100 + ☐ = 4 000
d. 8 400 + ☐ = 9 000
e. 8 800 + ☐ = 9 000
f. 7 500 + ☐ = 8 000
g. 4 200 + ☐ = 5 000
h. 6 700 + ☐ = 7 000
i. 5 900 + ☐ = 6 000
j. 9 600 + ☐ = 10 000

5. Calculate the missing number:

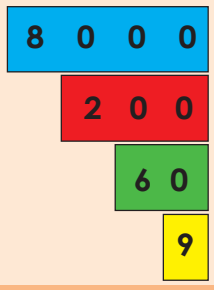
a. 12 450 + ☐ = 13 000
b. 10 560 + ☐ = 11 000
c. 9 640 + ☐ = 10 000
d. 11 870 + ☐ = 12 000
e. 13 720 + ☐ = 14 000
f. 15 120 + ☐ = 16 000
g. 19 580 + ☐ = 20 000
h. 18 810 + ☐ = 19 000
i. 17 430 + ☐ = 18 000
j. 14 070 + ☐ = 15 000

6. Calculate the missing number:

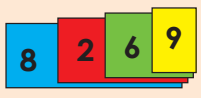
a. 10 784 + ☐ = 11 000
b. 11 877 + ☐ = 12 000
c. 11 819 + ☐ = 12 000
d. 12 627 + ☐ = 13 000
e. 13 561 + ☐ = 14 000
f. 12 753 + ☐ = 13 000
g. 14 436 + ☐ = 15 000
h. 19 213 + ☐ = 20 000
i. 17 409 + ☐ = 18 000
j. 15 126 + ☐ = 16 000

Number card fun ....

What you need:
Number (flard) cards from cut–out 2.



What to do:
- Play in pairs.
- Place the cards face down.
- The first player chooses one of each: thousand, hundreds, tens and unit flard cards, and displays them it as a number.



- The first player that fills the number up to the next 10 000, gets a point.
- Do the same but player two chooses the cards. Repeat five times.
- The player with the highest score is the winner.

What is the difference between the numbers?

1 100	1 200	1 300	1 400	1 500	1 600	1 700	1 800	1 900	2 000
2 005	3 005	4 005	5 005	6 005	7 005	8 005	9 005	10 005	11 005
9 750	9 850	9 950	10 050	10 150	10 250	10 350	10 450	10 550	10 650
9 500	10 000	10 500	11 000	11 500	12 000	12 500	13 000	13 500	14 000
10 750	11 750	12 750	13 750	14 750	15 750	16 750	17 750	18 750	19 750

1. What number comes next?

a. 6 600, 7 600, 8 600, _____ b. 10 500, 11 500, 12 500, _____

c. 14 300, 14 400, 14 500, _____ d. 12 750, 13 000, 13 250, _____

2. Complete the table

Number	Add 10	Add 100	Add 1 000	Add 10 000
10 950				
8 780				
12 900				
14 060				
17 009				

Examples:

Example 1:

11 547 + 4 587
= 10 000 + 1 000 + 4 000 + 500 + 500 + 40 + 80 + 7 + 7
= 10 000 + 5 000 + 1 000 + 120 + 14
= 10 000 + 6 000 + 100 + 20 + 10 + 4
= 10 000 + 6 000 + 100 + 30 + 4
= 16 134

Example 2:

	1	1	5	4	7	
+		4	5	8	7	
				1	4	(7 + 7)
			1	2	0	(40 + 80)
		1	0	0	0	(500 + 500)
		5	0	0	0	(1 000 + 4 000)
+		1	0	0	0	0	(10 000 + 0)
		1	6	1	3	4	

3. Use both methods above to calculate the following. Write down the steps.

a. 9 568 + 10 247 =

Continue on an extra sheet of paper.

b. 3 148 + 15 209 =

Continue on an extra sheet of paper.

c. 8 632 + 8 799 =

Continue on an extra sheet of paper.

d. 12 982 + 4 789 =

Continue on an extra sheet of paper.

e. 7 952 + 9 710 =

Continue on an extra sheet of paper.

f. 9 999 + 8 347 =

continued ☛

4. Solve the following word problems.

a. At the soccer match, there were 12 231 men and 7 893 women. How many people were there altogether at the soccer match?

Continue on an extra sheet of paper.

b. Michael is practising for a fun run. The first day he ran 4 189 m and the second day he ran 4 567 m. How far did he run in those two days?

Continue on an extra sheet of paper.

5. **Write an appropriate and interesting word sum for 15 000 and 3 000. Solve it.**

Continue on an extra sheet of paper.

+

What is the size of your number:

What you need:
Use the 1 000s dice you made before.
(Cut–out 3)
– Piece of paper.



What to do:
- Individual game against a group or the class.
- Roll the 1 000s dice.
- Add the number landed on, to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Learners check each others' addition sums.
- The winner is the person with the most correct answers.

2 999
5 783
3 874
12 342
18 209

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

What is the difference between the numbers?

1 000	2 000	3 000	4 000	5 000	6 000	7 000	8 000	9 000	10 000
3 006	4 006	5 006	6 006	7 006	8 006	9 006	10 006	11 006	12 006
10 050	11 050	12 050	13 050	14 050	15 050	16 050	17 050	18 050	19 050
10 250	10 260	10 270	10 280	10 290	10 300	10 310	10 320	10 330	10 340
9 500	10 500	11 500	12 500	13 500	14 500	15 500	16 500	17 500	18 500

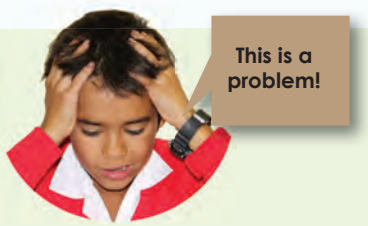
1. What number comes next?

a. 7 500, 7 400, 7 300, _____ b. 13 250, 12 250, 11 250, _____

c. 18 400, 17 400, 16 400, _____ d. 15 550, 14 550, 13 550, _____

2. Complete the table

Number	Subtract 10	Subtract 100	Subtract 1 000	Subtract 10 000
18 210				
17 540				
14 590				
13 900				
10 030				



Examples:

Example 1:

19 845 – 8 478

= 10 000 + (9 000 – 8 000) + (800 – 400) + (40 – 70) + (5 – 8)

= 10 000 + 1 000 + 400 + (30 – 70) – (15 – 8)

= 10 000 + 1 000 + 300 + (130 – 70) – (15 – 8) = 10 000 + 1 000 + 300 + 60 + 7= 11 367

Example 2:

	1	9	8	4	5	
–		8	4	7	8	
					7	(15 – 8)
				6	0	(130 – 70)
			3	0	0	(800 – 500)
		1	0	0	0	(9 000 – 8 000)
+	1	0	0	0	0	(10 000 – 0)
	1	1	3	6	7	

3. Use both methods to solve the subtraction sums.

a. 19 521– 7 214 =

b. 18 674 – 3 874 =

Continue on an extra sheet of paper.

c. 17 685 – 6 498 =

d. 18 741 – 9 688 =

Continue on an extra sheet of paper.

e. 19 548 – 12 358 =

f. What method do you prefer? Why?

Continue on an extra sheet of paper.

continued

Subtraction continued!

4. Solve the following word subtraction sums.

a. There are 15 876 people in the soccer stadium. 10 minutes before the final whistle, there were only 12 659 people left. How many people are left in the game?

Continue on an extra sheet of paper.

b. Mary bought 18 000 mm of rope. If she uses 10 550 mm, how many millimetres of rope does she have left?

Continue on an extra sheet of paper.

5. **Write an appropriate and interesting subtraction word sum for: 190 000 and 35 000. Solve it.**

Continue on an extra sheet of paper.

– What is the size of your number?

What you need:
- Use the 1 000s dice you made before.
- Piece of paper.



What to do:
- Individual game against a group or the class.
- Roll the 1 000s dice.
- Subtract the number landed on, from the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Learners check each others' subtraction sums.
- The winner is the person with the most correct answers.

15 342
18 3097
16 799
19 009
17 032

39 Let's Talk about Money

Talk about money. Look at the picture and make up your own



1. Colour the combination that will give you:

a. **R2** — R1 | R50 | R2 | R1 | R5 | R1

b. **R1** — R0,50 | R0,50 | R0,20 | R0,20 | R0,20 | R0,10

c. **R5** — R0,50 | R2 | R1 | R0,50 | R0,50 | R2 | R0,50

d. **R3,50** — R0,20 | R2 | R1 | R0,20 | R0,50 | R2 | R0,10

e. **R2,55** — R1 | R2 | R1 | R0,20 | R0,50 | R0,20 | R0,10 | R0,05

2. How much money will I have if I save the following amounts?

a. R2 + R1 + R5 + R20 = _____

b. 10c + 20c + 20c + 5c = _____

c. 50c + 20c + 50c + 5c + 10c = _____

d. 5c + R5 + 20c + R1 + R2 + 50c = _____

e. 50c + 20c + 5c + R 5,50 + 10c + 65c + R10 = _____

3. How much money will I have left if I spend the following amounts?

I have	I spent	I have left
R20	R5, R2, R5	
R15	20c, 50c	
R15	50c, 5c, 20c,5c, 10c, 2c	
R12	R2, 20c, 50c, 5c, R1, 5c, 20c	
R20	R1,20c, 5c, R5, 50c, 70c, R2	

4. Calculate the following:

a. R12 – R5 – R2 + R1 – R2 = _____

b. R2,50 – 20c + 50c + 10c – 50c – 20c = _____

c. R15 – 50c + 10c + 20c – 5c – 20c = _____

d. R2 + 50c + R5 + R1 – R2 – 5c = _____

e. R3 + 50c + 20c + 5c – 10c + R7,25 – R1,05 + 20c = _____

5. How many combinations can you make to get R 1,00 ?

Continue on an extra sheet of paper.

Money fun ....

Look at the animals on these notes. Do you know what "the Big Five" are?



40 Saving, Buying and Selling

Six friends talk about saving money.



My mom says I need to save money. Why?



Yes, and a little bit of money every month will give you a lot after a few months.

Yes! We cannot always just get want we want. We need to save money, by putting some money away for a few months.





I can even sell some of my old things if I want to make more money.



Yes like a jumble sale!

1. Answer the following questions:

a. I sold a book for R50 at a secondhand book shop. I bought a secondhand book for R25,00. How much change did I get? Show your calculations below.



Continue on an extra sheet of paper.

b. I sold my old bicycle for R150,00 to my friend. I bought myself a new soccer ball for R89,99. How much money did I have left? Show your calculations below.

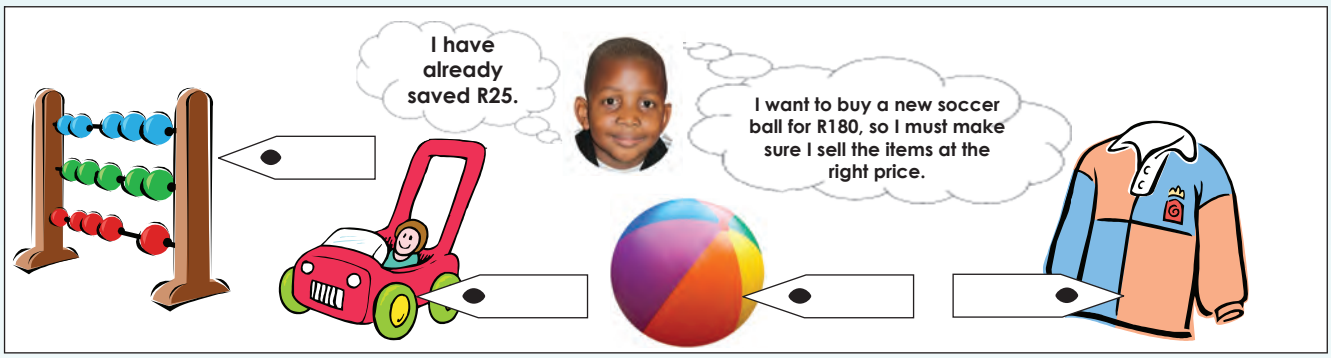


Continue on an extra sheet of paper.

c. You sold your soccer jersey for R65,00. You bought some soccer socks for R19,99 and new colour pencils for R23,50. How much money do you have left?

Continue on an extra sheet of paper.

2. You have saved some money. Now you are having a Jumble sale to make some more money so that you can buy what you want. You need to put a price tag on each item you are going to sell. Do this.



a. How much money have you already saved? _____

b. What do you want to buy? _____ What is the price? _____

c. How much will you make selling all the items? _____

d. Will you have money left over after you buy what you want?

_____



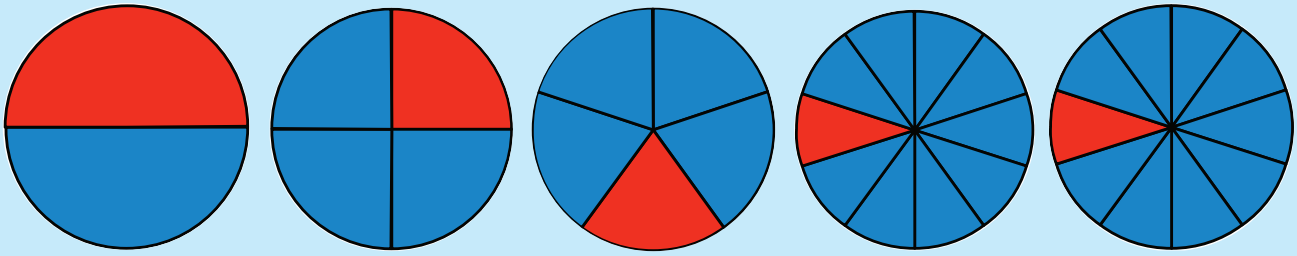
Find out....

Find out from your nearest vendor or shop the following:

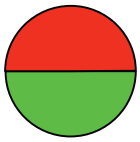
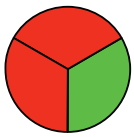
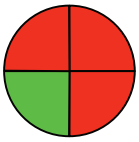
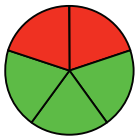
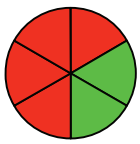
1. What are the common items they buy each month?
2. What are the common items they sell each month?

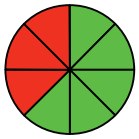
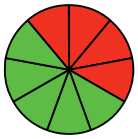
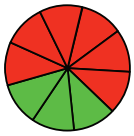
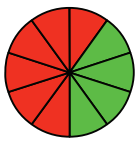
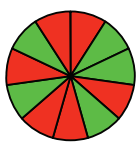
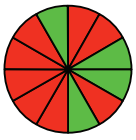
Fractions

What fraction of each circle is red?

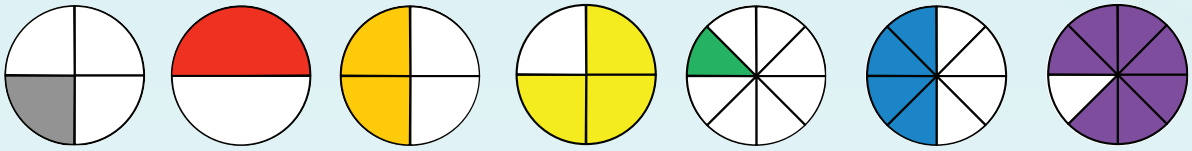


1. Complete the tables below.

Fraction circle	What fraction is red?	What fraction is green?
a. 	$\frac{1}{2}$	$\frac{1}{2}$
b. 		
c. 		
d. 		
e. 		
f. 		

Fraction circle	What fraction is red?	What fraction is green?
a. 		
b. 		
c. 		
d. 		
e. 		
f. 		

2. Use the fraction circles to answer the questions.



Fill in <,> or =

a. $\frac{4}{8}$ ☐ $\frac{3}{4}$

b. $\frac{1}{2}$ ☐ $\frac{2}{4}$

c. $\frac{7}{8}$ ☐ $\frac{3}{4}$

d. $\frac{1}{2}$ ☐ $\frac{4}{8}$

e. $\frac{1}{8}$ ☐ $\frac{1}{4}$

f. $\frac{2}{4}$ ☐ $\frac{7}{8}$

3. Use the fraction strips to answer the questions. Fill in <,> or =.



a. $\frac{4}{12}$ ☐ $\frac{1}{3}$

b. $\frac{1}{2}$ ☐ $\frac{1}{3}$

c. $\frac{3}{4}$ ☐ $\frac{1}{2}$

d. $\frac{2}{6}$ ☐ $\frac{1}{3}$

e. $\frac{1}{2}$ ☐ $\frac{2}{6}$

f. $\frac{4}{12}$ ☐ $\frac{2}{6}$

4. Which fraction comes next if I count forwards?

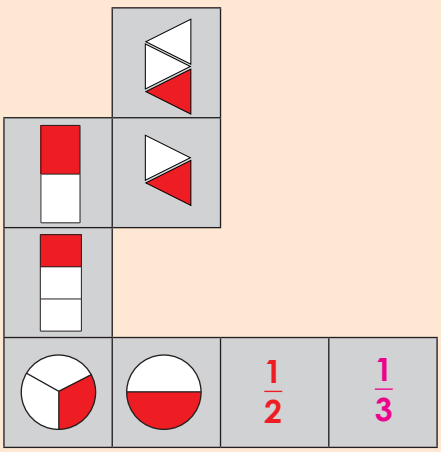
a. $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ ☐

b. $\frac{1}{7}$ $\frac{2}{7}$ $\frac{3}{7}$ ☐

c. $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ ☐

d. $\frac{6}{12}$ $\frac{7}{12}$ $\frac{8}{12}$ ☐

Fraction Dominoes

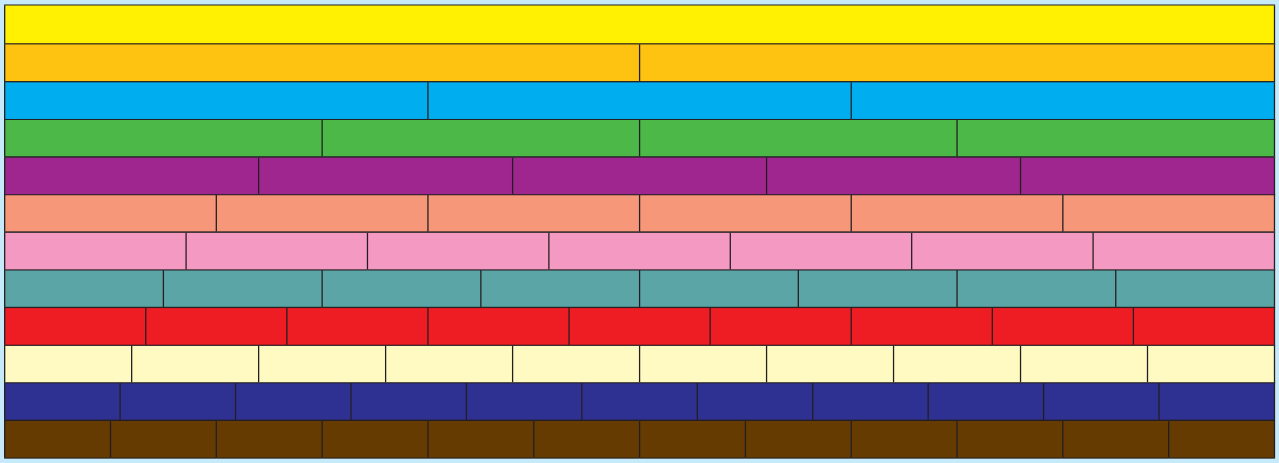


- Use cut–out 5.
- After shuffling the dominoes, each player draws tiles to make up their hand. The number of tiles drawn depends on the number of players.
- The player with the largest fraction starts the game. Play goes to the left (clockwise). Each player adds a domino to an open end of the layout, if possible.
- A player who cannot make a move must pass. The game ends when one player uses the last domino in his or her hand, or when no more plays can be made. If all players still have tiles in their hand, but cannot make any more moves, then the game is said to be "blocked".

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

42 Equivalent and comparing fractions

Write the fraction on each part.



1. What fraction is equal to:

a. $\frac{1}{2}$ ____ b. $\frac{6}{8}$ ____ c. $\frac{1}{3}$ ____

d. $\frac{3}{12}$ ____ e. $\frac{6}{9}$ ____

2. Give five fractions that are bigger than:

a. $\frac{1}{2}$ ____ ____ ____ ____ ____

b. $\frac{1}{4}$ ____ ____ ____ ____ ____

c. $\frac{2}{5}$ ____ ____ ____ ____ ____

d. $\frac{3}{8}$ ____ ____ ____ ____ ____

e. $\frac{3}{10}$ ____ ____ ____ ____ ____

f. $\frac{1}{3}$ ____ ____ ____ ____ ____

g. $\frac{3}{4}$ ____ ____ ____ ____ ____

h. $\frac{3}{5}$ ____ ____ ____ ____ ____

i. $\frac{7}{8}$ ____ ____ ____ ____ ____

j. $\frac{8}{10}$ ____ ____ ____ ____ ____

3. Give five fractions that are smaller than:

a. $\frac{1}{2}$ ____ ____ ____ ____ ____

b. $\frac{1}{4}$ ____ ____ ____ ____ ____

c. $\frac{2}{5}$ ____ ____ ____ ____ ____

d. $\frac{3}{8}$ ____ ____ ____ ____ ____

e. $\frac{3}{10}$ ____ ____ ____ ____ ____

f. $\frac{5}{12}$ ____ ____ ____ ____ ____

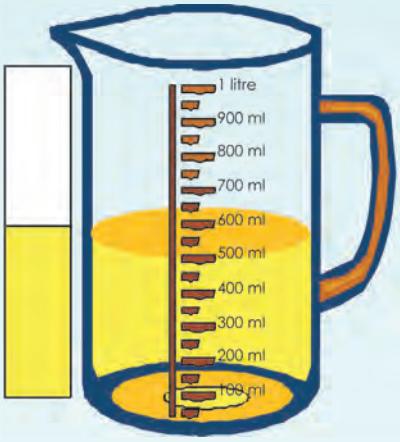
g. $\frac{1}{3}$ ____ ____ ____ ____ ____

h. $\frac{2}{5}$ ____ ____ ____ ____ ____

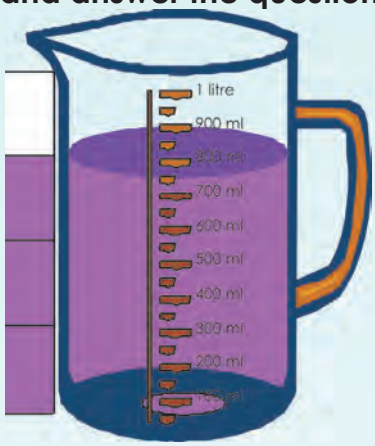
i. $\frac{2}{12}$ ____ ____ ____ ____ ____

j. $\frac{1}{7}$ ____ ____ ____ ____ ____

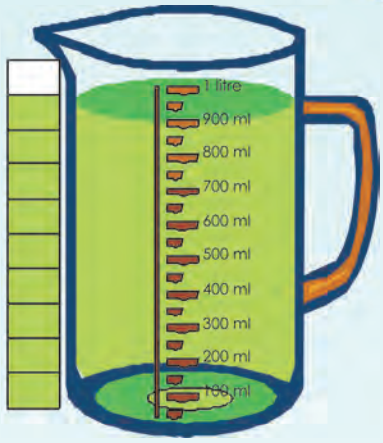
4. Look at the 1 litre jugs below and answer the questions.



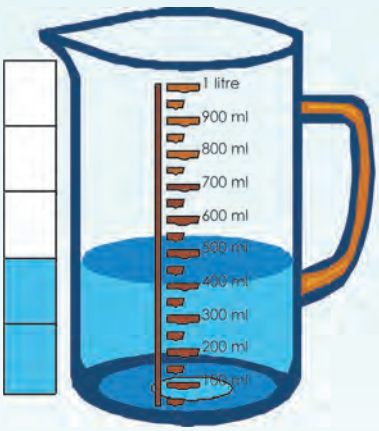
a. $\frac{1}{2}$ of a litre is ____ ml



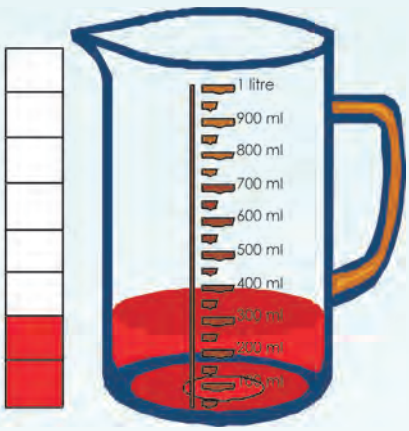
b. $\frac{3}{4}$ of a litre is ____ ml



c. $\frac{9}{10}$ of a litre is ____ ml



d. $\frac{2}{5}$ of a litre is ____ ml



e. $\frac{2}{8}$ of a litre is ____ ml

5. Fill in <, > or =

a. $\frac{1}{2}$ of a litre ☐ $\frac{2}{8}$ of a litre.

b. $\frac{3}{4}$ of a litre ☐ $\frac{1}{2}$ of a litre.

c. $\frac{2}{5}$ of a litre ☐ $\frac{9}{10}$ of a litre.

d. $\frac{2}{8}$ of a litre ☐ $\frac{3}{4}$ of a litre.

e. $\frac{2}{5}$ of 1 000 ml ☐ $\frac{1}{2}$ of 1 000 ml

f. $\frac{3}{4}$ of 1 000 ml ☐ $\frac{2}{5}$ of 1 000 ml

Fraction Dominoes

Play fraction dominoes.

43 Grouping and sharing

Look at the pictures below.
Each child got 1 slice of pizza.
How many children shared the pizza?
What fraction of a pizza did each child get?



1. Use the drawings below to help you to solve the problems.

a. Each child must get one quarter of a pizza. How many children can get slices from 3 pizzas?

Pizzas



b. My mother made 5 milk tarts for a function. Each person should get $\frac{1}{6}$ of a tart. How many people will get a piece of tart?

Tarts



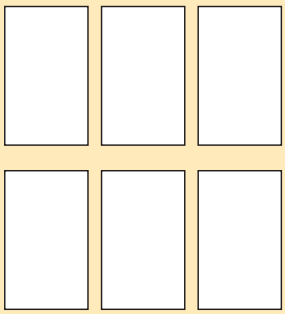
c. Two cakes are shared equally between eight learners.
What fraction of a cake will each learner get?

Cakes



d. Divide 6 sheets of paper equally between 24 learners.
What fraction of the paper will each learner get?

Sheets of paper



e. Look at the picture and write down your own word sum.

Chocolate

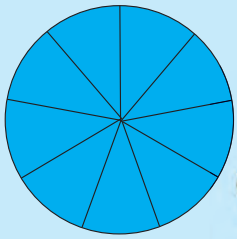


Fraction Dominoes

Play fraction dominoes.

Fractions

Quick recall: How fast can you answer the following?



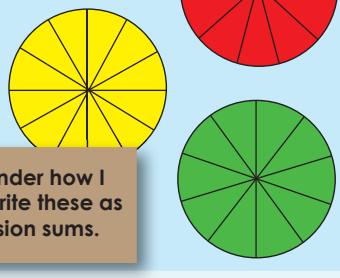


This circle is divided into 9 equal pieces. I can also say 1 divided by 9.

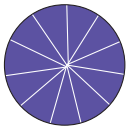
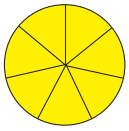
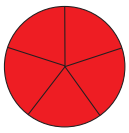
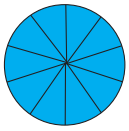
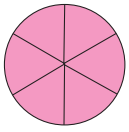
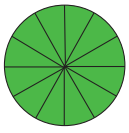
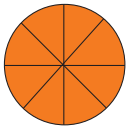
$1 \div 9$



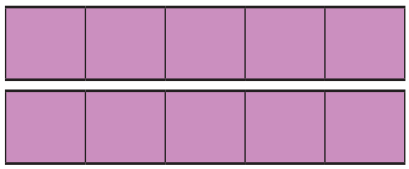
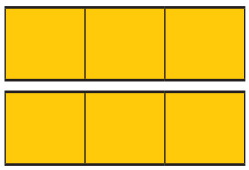
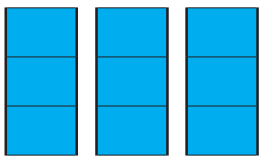
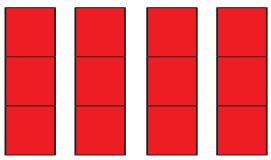
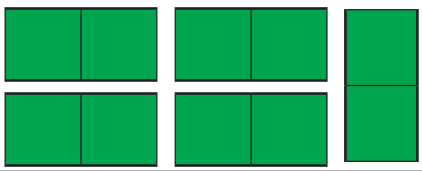
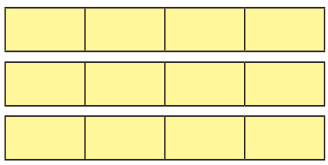
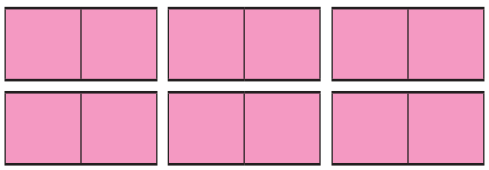
I wonder how I can write these as division sums.



1.

Fraction circles.		Fraction pieces. Make your own drawing.	Write a division sum.
	$\frac{1}{11}$		
	$\frac{1}{7}$		
	$\frac{1}{5}$		
	$\frac{1}{10}$		
	$\frac{1}{6}$		
	$\frac{1}{12}$		
	$\frac{1}{8}$		

2. Complete the table.

Fraction strips	Fraction	Division
	Fifths	$2 \div 10 = \frac{1}{5}$
		
		
		
		
		
		

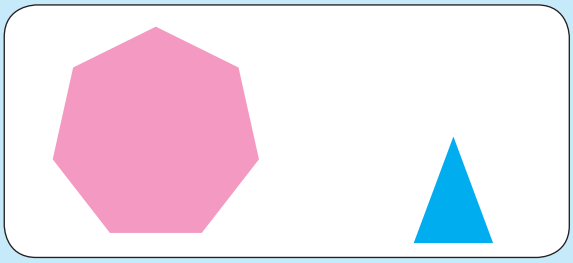
Fraction hunt …

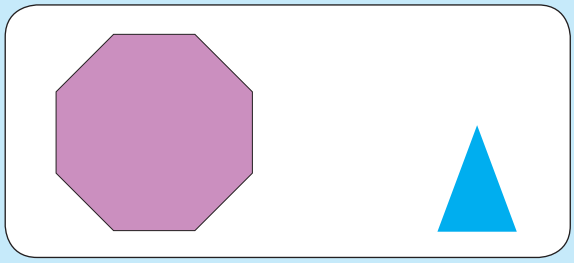
Find in magazines or draw fractions for:

3 ÷ 9 **2 ÷ 10** **5 ÷ 15**

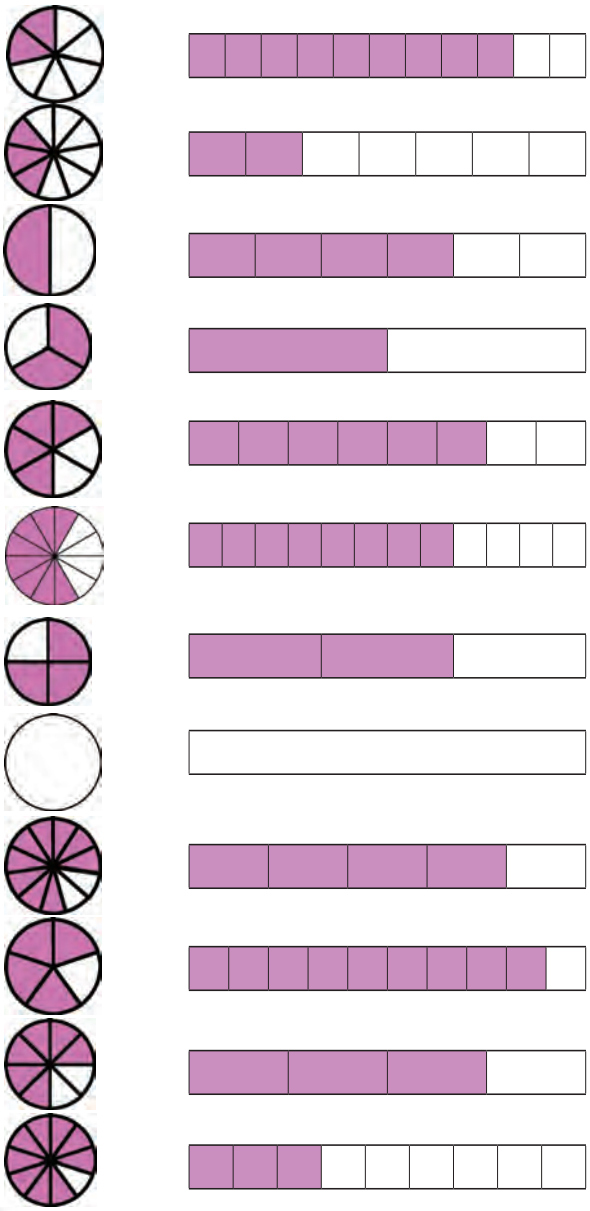
45 Fractions: halves to twelfths

How many triangles can you fit onto the pink shape?





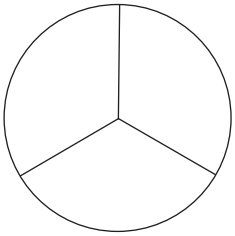
1. Match the fraction strip with the fraction circle on the left.



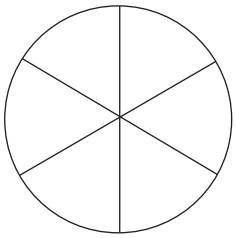
2. Find the fraction and colour in the following.

$\frac{2}{3}$	$\frac{4}{10}$	$\frac{2}{5}$	$\frac{2}{12}$	$\frac{6}{8}$	$\frac{3}{7}$	$\frac{4}{6}$

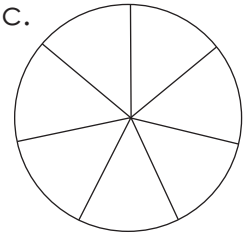
a.



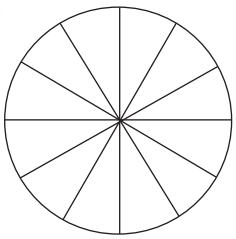
b.



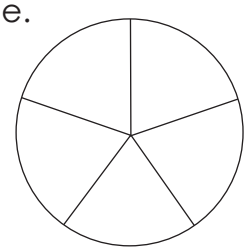
c.



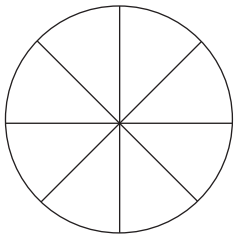
d.



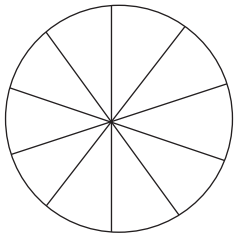
e.



f.



g.



3. Fill in <, > or =

a. $\frac{1}{2} \square \frac{1}{12}$ b. $\frac{1}{7} \square \frac{1}{9}$ c. $\frac{1}{11} \square \frac{1}{12}$ d. $\frac{1}{3} \square \frac{1}{9}$

e. $\frac{1}{10} \square \frac{1}{5}$ f. $\frac{2}{5} \square \frac{1}{10}$ g. $\frac{4}{8} \square \frac{1}{2}$ h. $\frac{3}{12} \square \frac{1}{4}$

i. $\frac{4}{12} \square \frac{1}{3}$ j. $\frac{5}{12} \square \frac{5}{11}$ k. $\frac{3}{9} \square \frac{1}{3}$ l. $\frac{5}{10} \square \frac{1}{2}$

m. $\frac{6}{12} \square \frac{1}{2}$ n. $\frac{6}{11} \square \frac{1}{6}$ o. $\frac{6}{9} \square \frac{2}{3}$ p. $\frac{3}{4} \square \frac{10}{12}$

4. Extend the following:

a. $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ $\square$

b. $\frac{1}{12}$ $\frac{2}{12}$ $\frac{3}{12}$ $\square$

c. $\frac{1}{6}$ $\frac{2}{6}$ $\frac{3}{6}$ $\square$

d. $\frac{1}{8}$ $\frac{2}{8}$ $\frac{3}{8}$ $\square$

e. $\frac{4}{9}$ $\frac{5}{9}$ $\frac{6}{9}$ $\square$

f. $\frac{3}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\square$

g. $\frac{9}{10}$ $\frac{8}{10}$ $\frac{7}{10}$ $\square$

h. $\frac{4}{5}$ $\frac{3}{5}$ $\frac{2}{5}$ $\square$

Fraction Dominoes ...

Play fraction dominoes.

46 Metres

What is a metre?

Find out what a metre is.

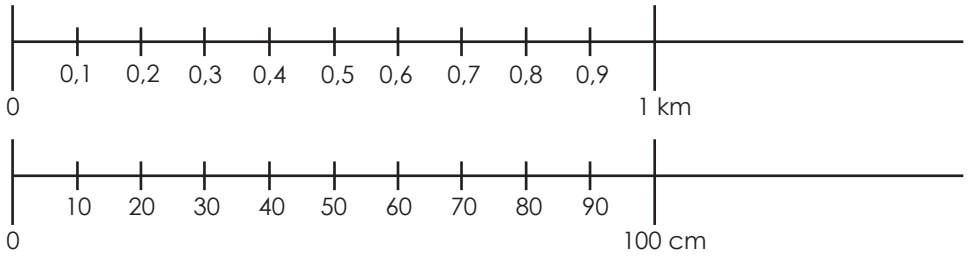
How many 30 cm rulers do you need to make one metre?

About how many steps will make a metre?

How many cans will make one metre?

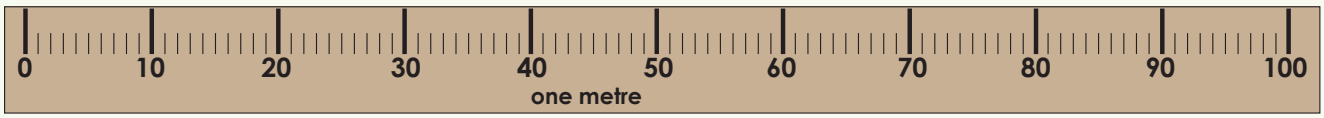


1. Extend the number lines below. What do you notice?



2. Complete the table below by estimating and measuring.

	Estimate	Measure
Length of your table		
Length of the classroom		
Distance from one side of the road to the other side of the road		





3. Convert the following:

a. 30 cm = _____ m

b. 10 cm = _____ m

c. 55 cm = _____ m

d. 1 m = _____ cm

e. 200 mm = _____ m

f. 1 250 mm = _____ m

4. What unit will you use when measuring each of the following?

a. Length of a door _____

b. Width of a book _____

c. Length of a rugby field _____

d. Pencil thickness _____

e. Length of a car _____

f. Length of a shoe _____

continued

5. What distance is it from:

a. the teacher to you? _____

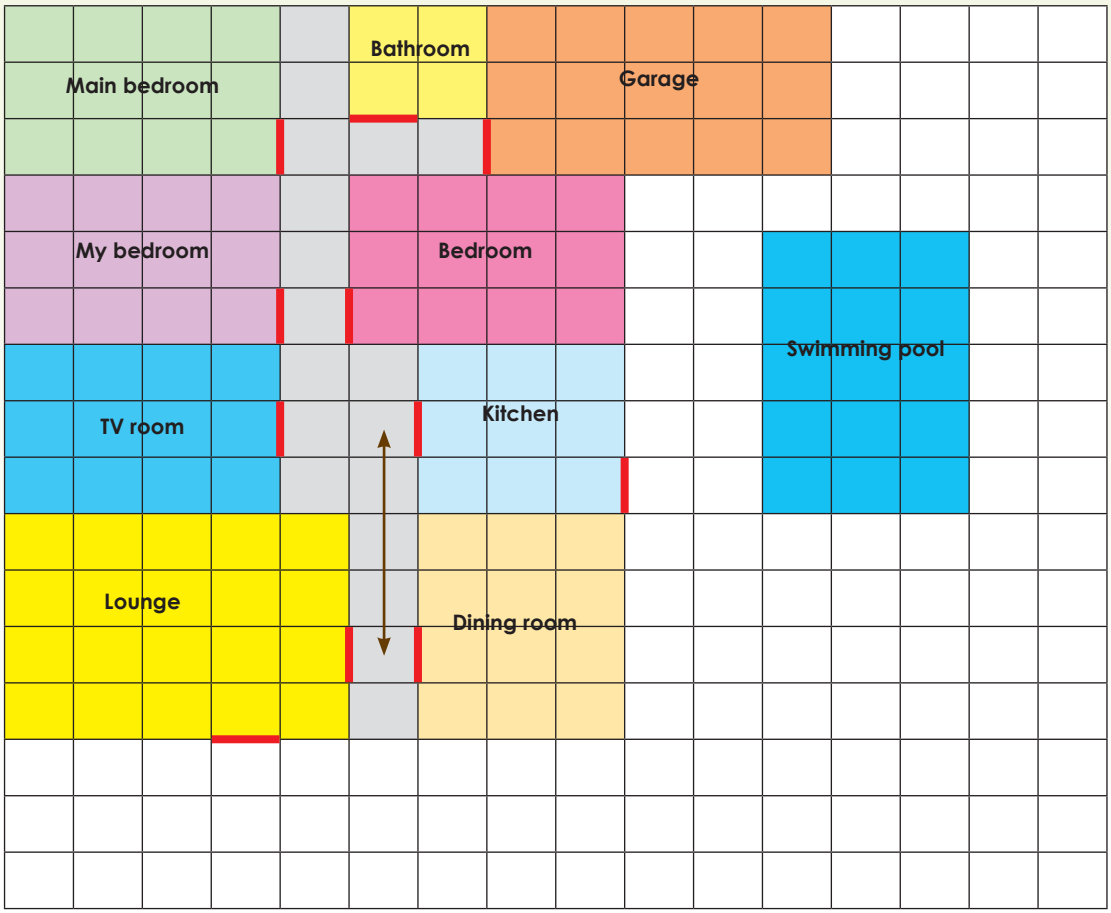
b. your bed to the bathroom? _____

c. your classroom to the principal's office? _____

d. of your classroom to the bathroom? _____

e. from your bag to the top of your table? _____

6. Look at the floor plan (top view) of this house and complete the table on the next page.



How far is:	m	cm
a. The **kitchen door** from the **dining room door**?	4	400
b. My **bedroom door** from the **garage door**?		
c. The **dining room** from the **bathroom**?		
d. My **parents bedroom door** from **my bedroom door**?		
e. The **pool** from the front **door**?		
f. My **bedroom door** from the **TV room door**?		
g. The **pool** from the TV **room**		
h. The **dining room** door from the **kitchen door**?		
i. The **front door** from **my bedroom door**?		
j. The **bathroom door** from the **garage door**?		

It is one metre ...



How many things can you find that are 1 metre long?

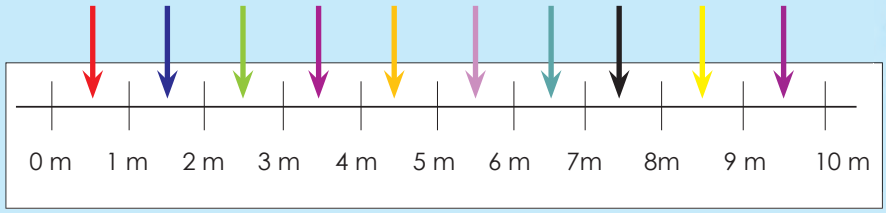
Write down, as many things as you can.



Decimals through Measurement

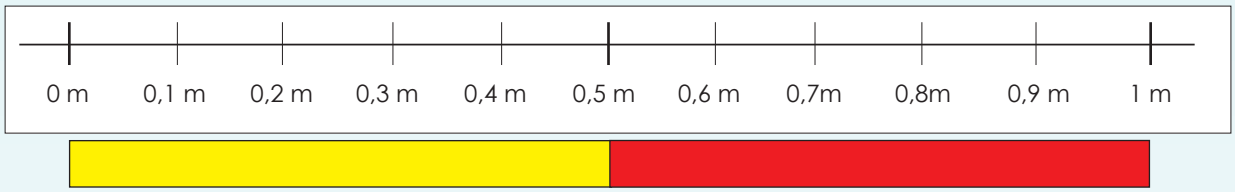
What numbers will you write where the arrows point?







1. Use the 1 metre number line to answer the questions below.



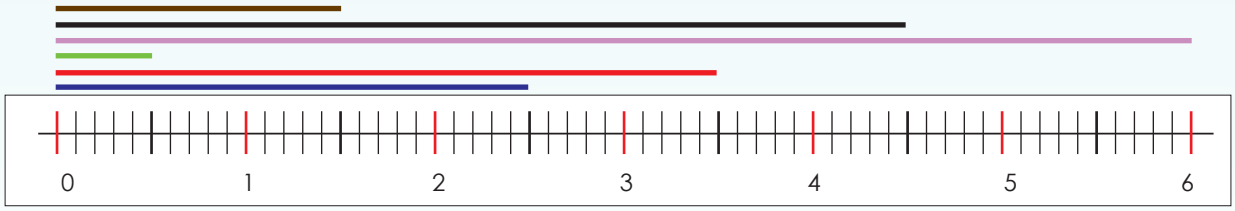
a. Which number comes after 0,4 m? _____ 0,9 m ? _____

b. Which number comes before 0,7 m? _____ 0,1 m ? _____

c. What is one half of a metre? _____ m

d. How many number line intervals are there from 0 to 1 m? _____

2. Use the 6 metre tape to say how long each line is.



a. blue line = _____

b. red line = _____

c. green line = _____

d. purple line = _____

e. black line = _____

f. brown line = _____

3. What number will come next?

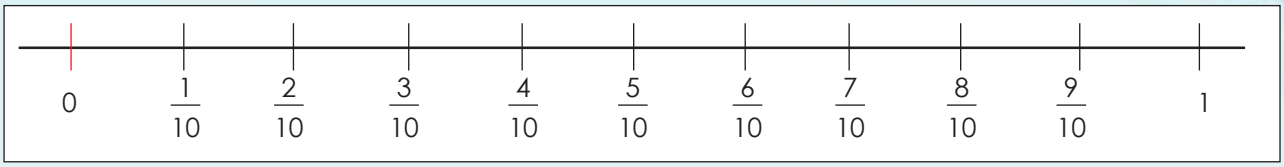
a. 3,5 m, 4 m, 4,5 m, _____

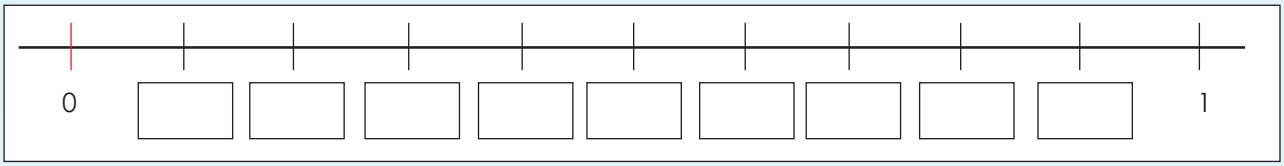
b. 9 m, 9,5 m, 10 m, _____

c. 18,5 m, 18, 17,5 m, _____

d. 20,5, 20, 19,5, _____

4. Write the fraction in decimal form.





a. three tenths _____ b. six tenths _____ c. two tenths _____

d. four tenths _____ e. nine tenths _____ f. five tenths _____

5. Fill in <, > or =

a. two tenths _____ three tenths

b. 0,3 _____ 5 tenths

c. nine tenths _____ 0

d. zero _____ 0,4

e. 7 tenths _____ 7 tens

f. one _____ one tenth

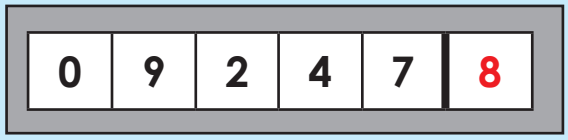
6. I need to walk 1 km to school. I walked 0,4 km of the km and then met my friend. What part of the kilometre did we walk together?

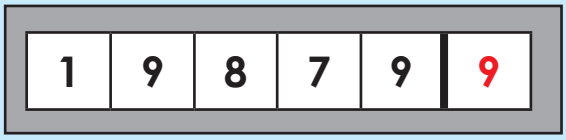
Continue on an extra sheet of paper.

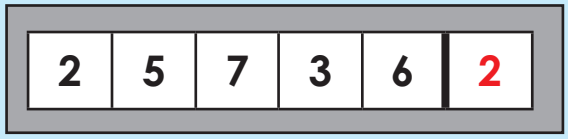
Fraction Dominoes

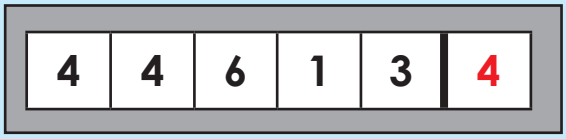
Play fraction dominoes.

What is the reading on the odometer?









1. Answer the following questions

a. How many 500 m are there in 4 km? _____

Let us count in km 0,5 km; 1 km; 1,5 km; 2 km; 2,5 km; 3 km; 3,5 km; 4 km

b. How many 500 m are there in 12,5 km ? _____

Let us count in km: _____

c. How many 500 m are there in 9 km? _____

Let us count in km: _____

d. How many 500 m are there in 18,5 km? _____

Let us count in km: _____

e. How many 500 m are there in 23 km? _____

Let us count in km: _____

f. How many 500 m are there in 16,5 km? _____

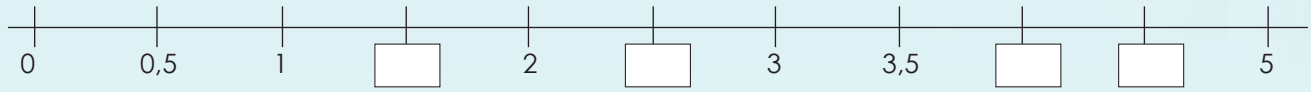
Let us count in km: _____

g. How many 500 m are there in 27,5 km? _____

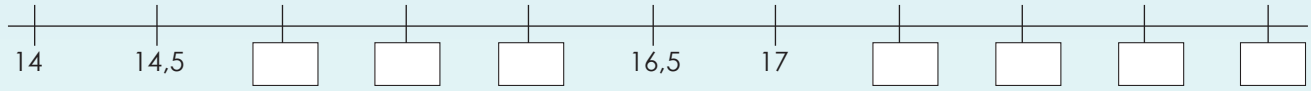
Let us count in km: _____

2. Fill in the missing numbers.

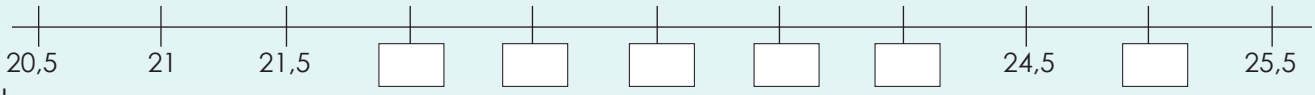
a.



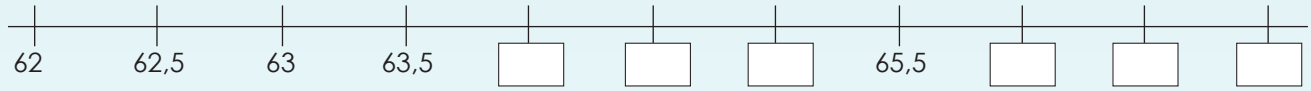
b.



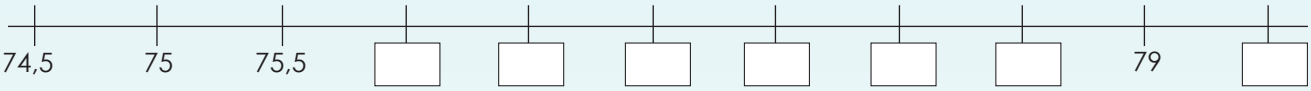
c.



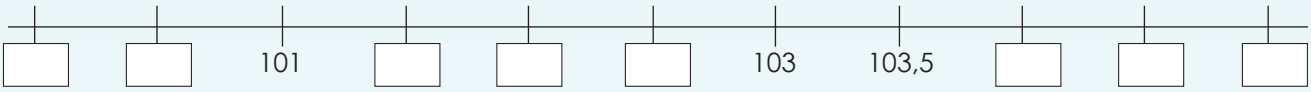
d.



e.



f.



3. Fill in <, > or =

a. 2,5 ☐ 2

b. 0,5 ☐ 1

c. 10 ☐ 9,5

d. 7,5 ☐ 8

e. 12,5 ☐ 11,5

f. 212,5 ☐ 221,5

g. 412,50 ☐ 412,5

h. 23 ☐ 22,5

i. 3 651,50 ☐ 3 651

j. 8 120 ☐ 8 120

k. 4 405 ☐ 4 045,5

l. 12 151 ☐ 12 115,5

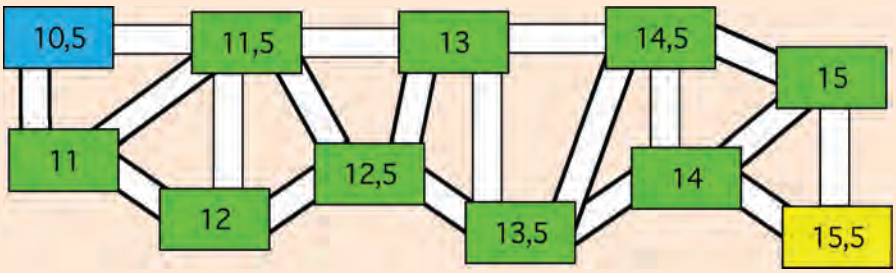
m. 18 118 ☐ 18 181,5

n. 4 512 ☐ 4 512

o. 150,50 ☐ 150,50

Follow the path

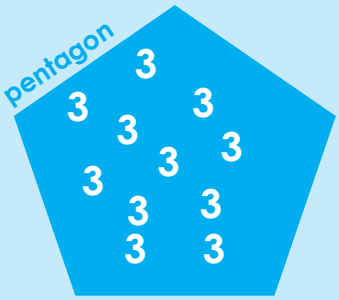
Start on the blue rectangle, draw the path counting forward, and end on the yellow rectangle.

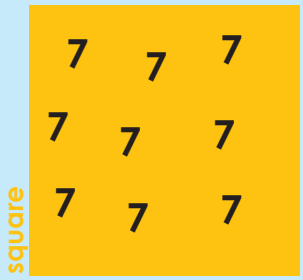


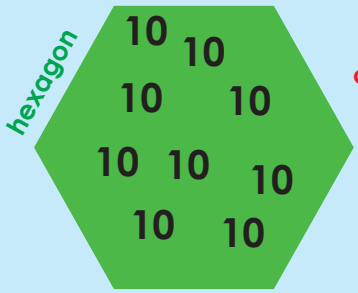
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

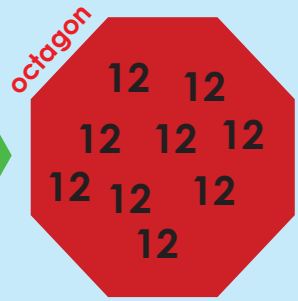
Multiplication: 1-digit by 2-digits

Give the total of the numbers in each shape. Use multiplication.









1. How fast can you complete this grid?

X	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
15										
20										

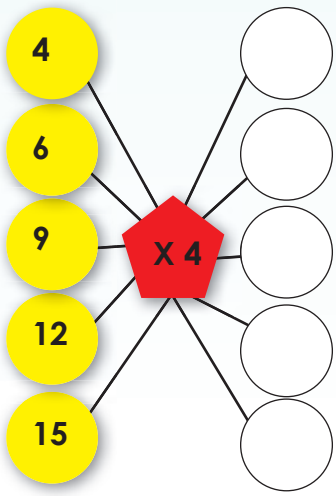


2. Describe the pattern shaded in yellow on the previous page.

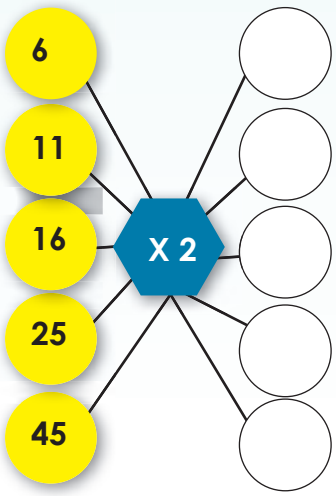
Continue on an extra sheet of paper.

3. Complete the spider diagrams.

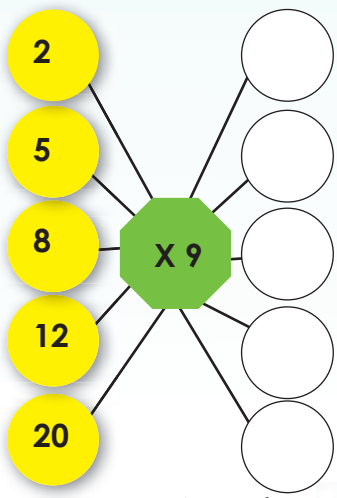
a.



b.



c.



continued

Multiplication: 1-digit by 2-digits continued!

d. Draw similar spider diagrams multiplying by 8 and one multiplying by 6.

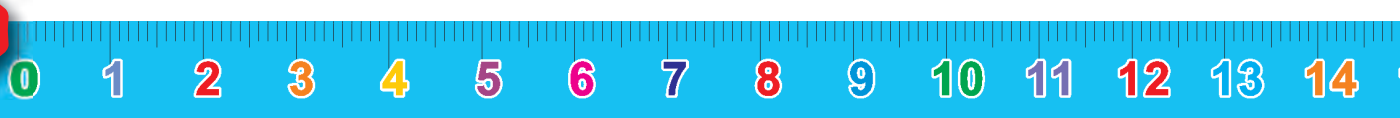
Continue on an extra sheet of paper.

4. The example below will help you to complete the other tables.

Multiples of 3

3 x 1	3 x 2	3 x 3	3 x 4	3 x 5	3 x 6
3	6	9	12	15	18

The multiples of 3 are 3, 6, 9, 12, 15, 18, ____, ____, ____, ____, ____, ____



a.

Multiples of 4

4 x 1	4 x 2	4 x 3			

The multiples of 4 are 4, 8, 12, ____, ____, ____, ____, ____, ____

b.

Multiples of 5

The multiples of 5 are ____, ____, ____, ____, ____, ____, ____, ____

Competition time

What you need:

- Coloured pencils.

What to do:

- Mark in the multiples as fast as you can:
- Multiples of 5 in **red**.
- Multiples of 6 in **blue**.
- Multiples of 10 in **green**.
- Multiples of 3 in **purple**.
- Multiples of 12 in **yellow**.



5 9 81 30 15 27 75 24 33 72 20 40 3 10 100 25 18 50 55 85 48 66

Check your answers:

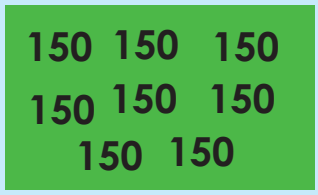
- You should have:
- 12 red circles
- 6 blue circles
- 6 green circles
- 13 purple circles
- 4 yellow circles

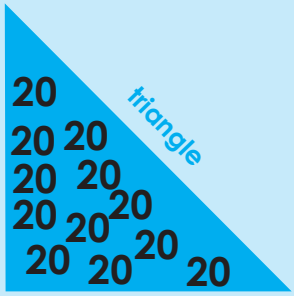
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

50 Multiplication: 2-digits by 1-digit, 2-digits by 2-digits

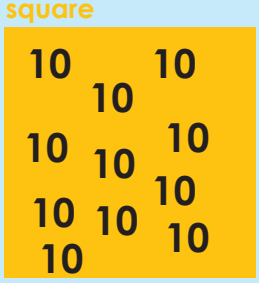
Give the total of the numbers in each shape. Use multiplication.

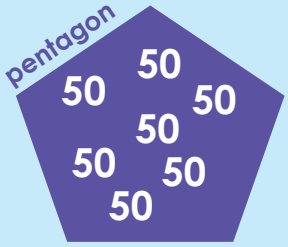
rectangle





square





1. Find the multiples.

a.

Multiples of 10

10 x 1	10 x 2	10 x 3	10 x 4	10 x 5	10 x 6
↓	↓	↓	↓	↓	↓
10	20	30	40	50	60

The multiples of 10 are _____, _____, _____, _____, _____, _____

b.

Multiples of 100

↓	↓	↓	↓	↓	↓

The multiples of 100 are _____, _____, _____, _____, _____, _____

c.

Multiples of 1 000

↓	↓	↓	↓	↓	↓

The multiples of 1000 are _____, _____, _____, _____, _____, _____

2. Use both methods to calculate the multiplication sums. Write the steps.

Examples:

Example 1:

43 x 7
= (40 + 3) x 7
= (40 x 7) + (3 x 7)
= 280 + 21
= 301

Example 2:

$$\begin{array}{rrr} & 4 & 3 \\ \times & & 7 \\ \hline & 2 & 1 \\ 2 & 8 & 0 \\ \hline 3 & 0 & 1 \end{array}$$

(3 x 7)
(40 x 7)

a. 16 x 3 =

Continue on an extra sheet of paper.

b. 24 x 4 =

Continue on an extra sheet of paper.

c. 30 x 6 =

Continue on an extra sheet of paper.

d. 54 x 7 =

Continue on an extra sheet of paper.

e. 79 x 9 =

Continue on an extra sheet of paper.

continued ☛

50b Multiplication: 2-digits by 1 digit, 2-digits by 2-digits continued!

3. Use both methods to calculate the multiplication sums. Write the steps in your workbook.

Examples:

Example 1:

23 x 14 =
(20 + 3) x (10 + 4)
= (20 x 10) + (3 x 10) + (20 x 4) + (3 x 4)
= 200 + 30 + 80 + 12
= 200 + 100 +10 + 10 + 2
= 300 + 20 + 2
= 322

Example 2:

```
   2 3
x  1 4
-------
   1 2   (3 x 4)
   8 0   (20 x 4)
   3 0   (3 x 10)
+ 2 0 0  (20 x 10)
-------
   3 2 2
```

a. 10 x 13 =

b. 15 x 15 =

c. 18 x 21 =

Continue on an extra sheet of paper.

d. 23 x 24 =

e. 36 x 28 =

f. 45 x 29 =

Continue on an extra sheet of paper.

g. 47 x 37 =

h. 54 x 69 =

Continue on an extra sheet of paper.

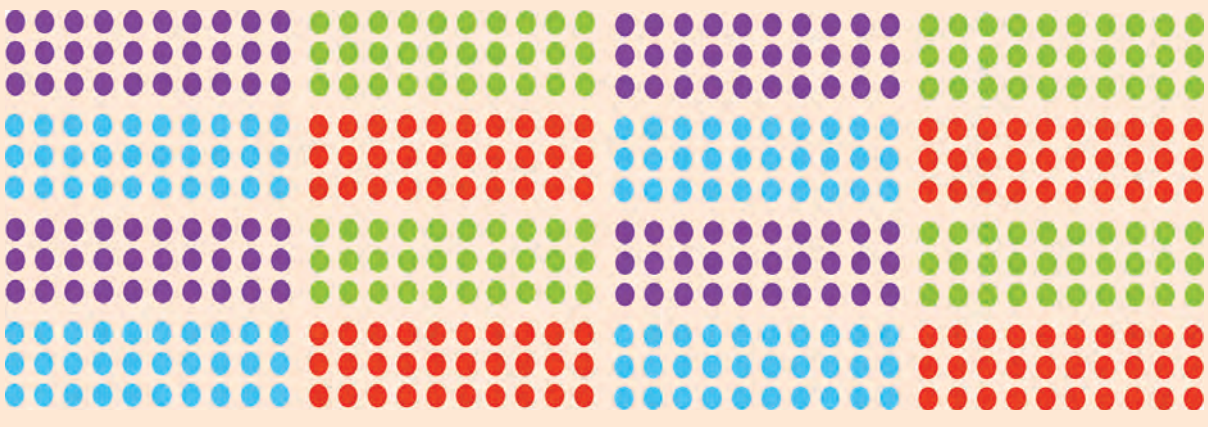
4. Solve the following:

My teacher bought 15 boxes of coloured pencils for R21 each and 15 colouring books for R18 each. How much did she pay in total?



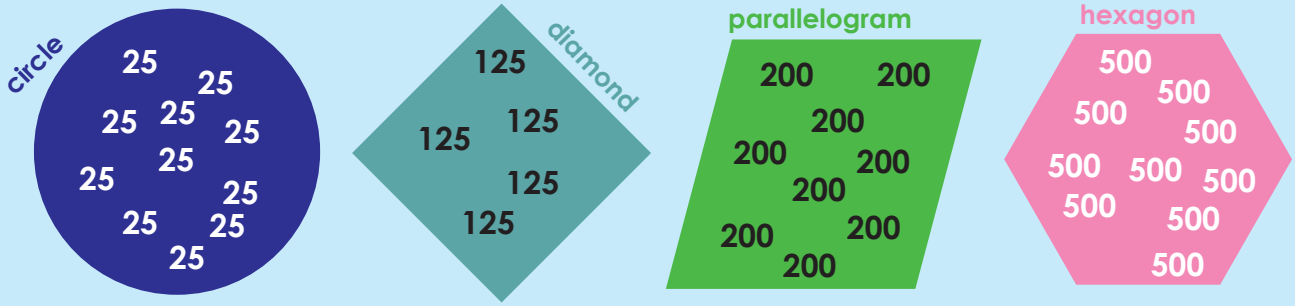
How fast are you?

How many dots do you count?



51 Multiplication: 2-digits by 2-digits

Give the total of the numbers in each shape. You should make use of multiplication.



1. Complete the table below.

Number	x 10	x 20	x 30	x 40	X 50	X 60	x 70	X 80	x 90
10									
15									
20									
25									
50									

2. Are these multiples of (extend the pattern).

a. **30?** 300, 330, 360, 390, ____ ____ ____ ____ ____

b. **25?** 125, 150, 175, 200, ____ ____ ____ ____ ____

c. **50?** 350, 400, 450, 500, ____ ____ ____ ____ ____

d. **100?** 1 000, 1 100, 1 200, 1 300, ____ ____ ____ ____ ____

e. **150?** 1 500, 1 650, 1 800, 1 950, ____ ____ ____ ____ ____



3. **Use both methods to solve the sums.**

Examples:

Example 1:

19 x 23
= (10 + 9) x (20 + 3)
= (10 x 20) + (9 x 20) + (10 x 3) + (9 x 3)
= 200 + 180 + 30 + 27
= 200 + 100 + 80 + 30 + 20 + 7
= 300 + 130 + 7
= 300 + 100 + 30 + 7
= 400 + 30 + 7
= 437

Example 2:

	1 9	
x	2 3	
	2 7	(9 x 3)
	3 0	(10 x 3)
	1 8 0	(9 x 20)
	2 0 0	(10 x 20)
	4 3 7	

a. 12 x 19 =

b. 14 x 21 =

Continue on an extra sheet of paper.

c. 17 x 24 =

d. 19 x 27 =

Continue on an extra sheet of paper.

e. 23 x 38 =

Continue on an extra sheet of paper.

continued ☛

51b Multiplication: 2-digits by 2-digits continued!

4. Use the method below to solve the multiplication sums.

Examples:

Example 1:

45 x 62
= (40 + 5) x (60 + 2)
= (40 x 60) + (5 x 60) + (40 x 2) + (5 x 2)
= 2 400 + 300 + 80 + 10
= 2 000 + 400 + 300 + 80 + 10
= 2 000 + 700 + 90
= 2 790

a. 28 x 43 =

b. 39 x 48 =

Continue on an extra sheet of paper.

c. 46 x 57 =

d. 67 x 72 =

Continue on an extra sheet of paper.

e. 84 x 93 =

Continue on an extra sheet of paper.

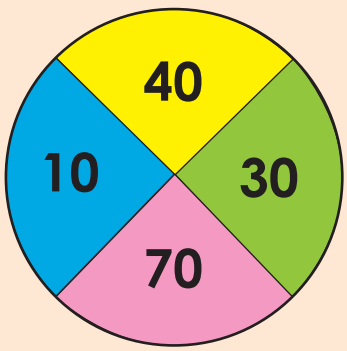
5. Solve the problem.

a. They say an apple a day keeps the doctor away. I have had one apple per day for the last 18 months. Approximately how many apples did I eat?



Continue on an extra sheet of paper.

How fast are you ...



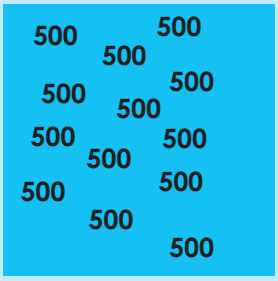
What to do:

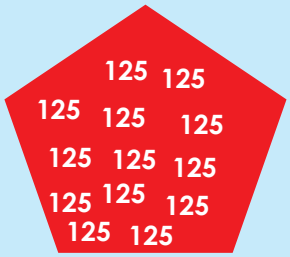
- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each number on the circle by the same colour rectangles to get your answer.

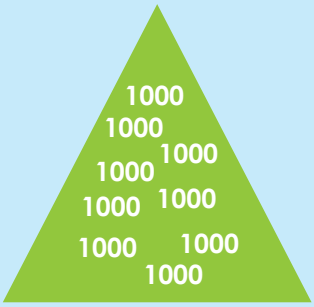
20		40	
30		50	
70		20	
70		90	
90		80	
20		100	
20		10	
60		50	
80		60	
10		60	

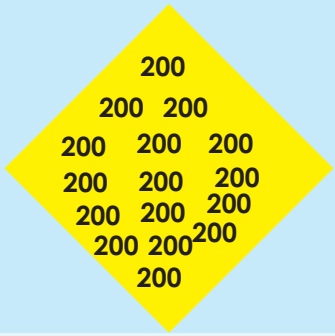
52 Multiplication: 2-digit by 3-digit and 4 -digits by 1 -digit

Give the total of the numbers in each shape. Use multiplication.









1. Complete the table below.

Number	x 100	x 200	x 300	x 400	x 5 00	x 600	x 700	x 800	x 900
15									
30									
50									
70									
25									

2. These are multiples of (extend the pattern).

a. **500:** 2 500, 3 000, 3 500, 4 000, ____ ____ ____ ____ ____

b. **1 000:** 10 000, 11 000, 12 000, 13 000, ____ ____ ____ ____ ____

c. **2 000:** 4 000, 6 000, 8 000, 10 000, ____ ____ ____ ____ ____

d. **250:** 2 500, 2 750, 3 000, 3 250, ____ ____ ____ ____ ____

e. **1 500:** 6 000, 7 500, 9 000, 10 500, ____ ____ ____ ____ ____



3. Use both methods to solve the multiplication sums.

Examples:

Example 1:

56 x 138

= (50 + 6) x (100 + 30 + 8)

= (50 x 100) + (50 x 30) + (50 x 8) + (6 x 100) + (6 x 30) + (6 x 8)

= 5 000 + 1 500 + 400 + 600 + 180 + 48

= **5 000 + 1 000 + 500 + 400 + 600 + 100 + 80 + 40 + 8**

= 6 000 + 1 600 + 120 + 8

= 6 000 + 1 000 + 600 + 100 + 20 + 8

= 7 000 + 700 + 20 + 8

= 7 728

Example 2:

		1	3	8
x			5	6
			4	8
		1	8	0
		6	0	0
		4	0	0
	1	5	0	0
	5	0	0	0
	7	7	2	8

(6 x 8)
(6 x 30)
(6 x 100)
(50 x 8)
(50 x 30)
(50 x 100)

a. 168 x 34 =

b. 219 x 49 =

Continue on an extra sheet of paper.

continued ☛

Multiplication: 2-digits by 3-digits and 4-digits by 1-digit continued!

c. 234 x 58 =

d. 312 x 65 =

Continue on an extra sheet of paper.

e. 306 x 73 =

Continue on an extra sheet of paper.

4. Solve the problems.

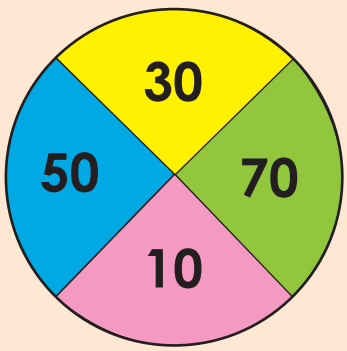
a. Every person in our school of 175 ate one apple each for 25 days. How many apples did we eat?

Continue on an extra sheet of paper.

b. My brother and four friends did extra work for 16 hours.
They got R122 per hour. How much did they get in total?

Continue on an extra sheet of paper.

How fast are you ...

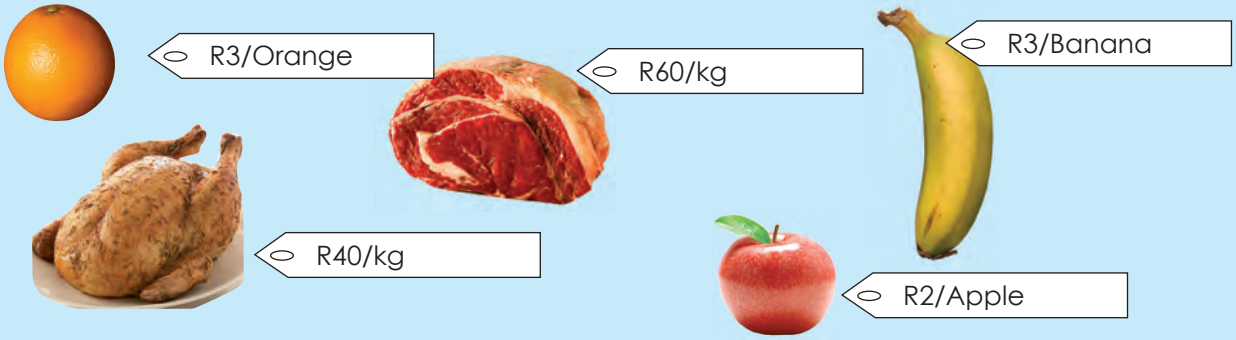


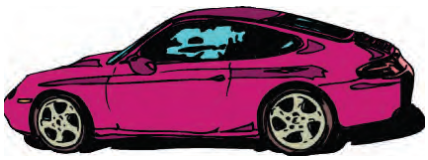
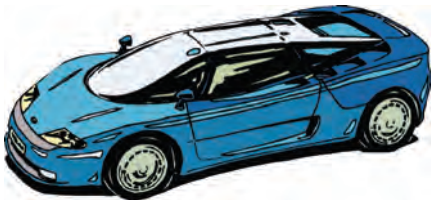
What to do:

- The aim is to see how fast you can fill in the answers in the white rectangles provided.
- Multiply each number on the circle by the same colour rectangles to get your answer.

30		60	
40		50	
70		30	
70		20	
20		20	
10		80	
10		90	
60		50	
20		60	
90		60	

Do you still remember the symbol for note?. Maybe this picture help you.



100 km/h 	**50 km/h** 
120 km/h 	**80 km/h** 

1. How far did each car travel? Complete the table.

	1 hour	2 hours	3 hours	4 hours
Pink car				
Purple car				
Blue car				
Green car				

2. Complete the following:



R60/kg



R12,50/litre

How much will you pay for:

a. 1 kg _____

b. 2 kg _____

c. 3 kg _____

d. 4 kg _____

e. 5 kg _____

f. 6 kg _____

g. 7 kg _____

h. 8 kg _____

i. 9 kg _____

j. 10 kg _____

How much will you pay for:

a. 1 *l* _____

b. 2 *l* _____

c. 3 *l* _____

d. 4 *l* _____

e. 5 *l* _____

f. 6 *l* _____

g. 7 *l* _____

h. 8 *l* _____

i. 9 *l* _____

j. 10 *l* _____

What is the rate …

Go to your nearest shop and find out what the rate is for:









Rectangular Prisms and Cubes

Look at the picture. Discuss it. Use words such as cubes and rectangular prisms.



1. Write the number of objects you see in the picture next to the word.

Rectangular prisms ☐ Cubes ☐

Cylinders ☐ Spheres ☐

2. Draw the following on the picture:

a. 2 cubes

b. 2 rectangular prisms

c. 2 spheres

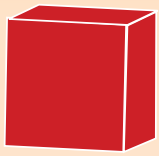
d. 2 cylinders

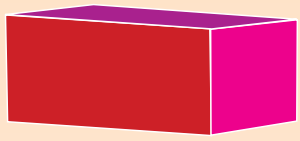
3. Circle the following:

a. Prism (s) in blue

b. Pyramid (s) in orange

4. Say whether each 3-D object is a cube or a rectangular prism.





5. What is the difference between a cube and a rectangular prism? First draw the net of each – this will help you to describe it.

Cube	Rectangular prism

Real life …

On a poster present the following:

Five everyday life objects that are **rectangular** prisms.

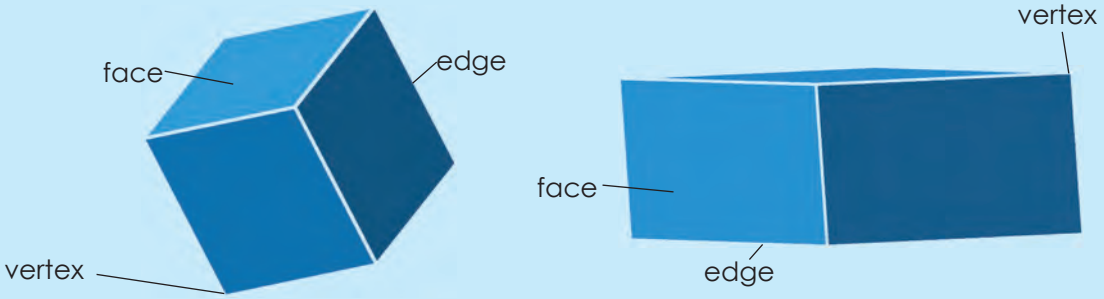
One everyday life object of each:
- Hexagonal prism
- Pentagonal prism

Five everyday life objects that are **cubes**.



55 Faces

Can we see all the faces of the objects?

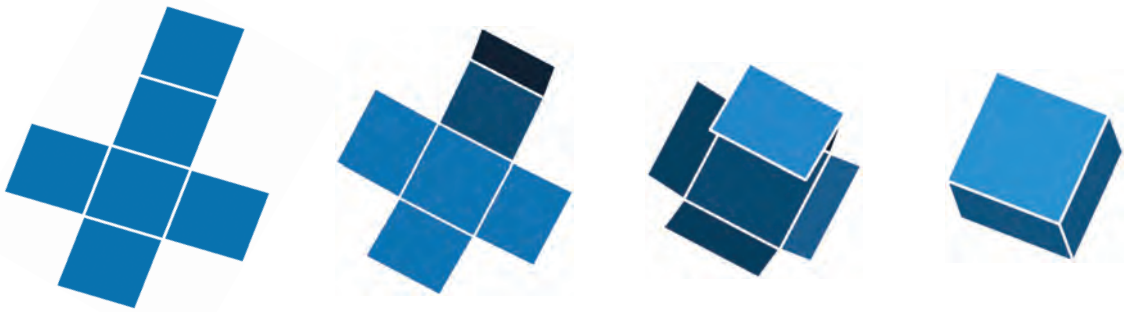


1. Use Cut-out 6. Fold the nets (patterns) to make a cube and a rectangular prism. Name the shape of each face.

Prism	Shapes of the faces	Number of faces
a. Triangular prism		
b. Rectangular prism		
c. Cube		
d. Pentagonal prism		
e. Hexagonal prism		

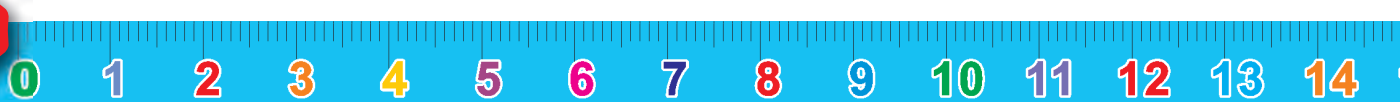
2. Name the object. Name the shape and number of the faces.

a.

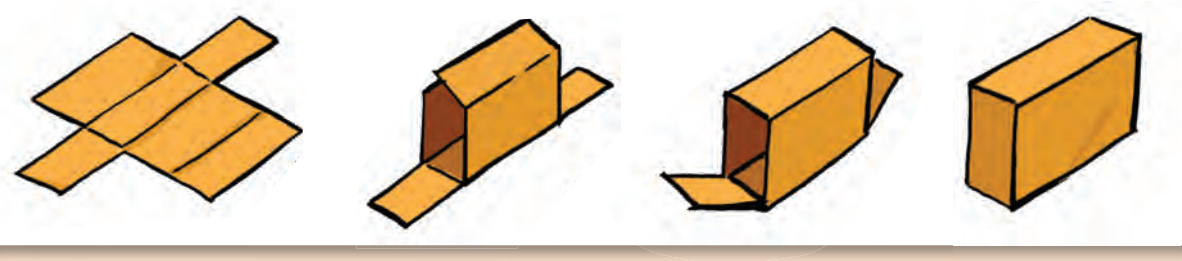


Name of object: _____ Shape of faces: _____

Number of faces: _____



b.



Name of object: _____ Shape of faces: _____

Number of faces: _____

c.



Name of object: _____ Shape of faces: _____

Number of faces: _____

d.



Name of object: _____ Shape of faces: _____

Number of faces: _____

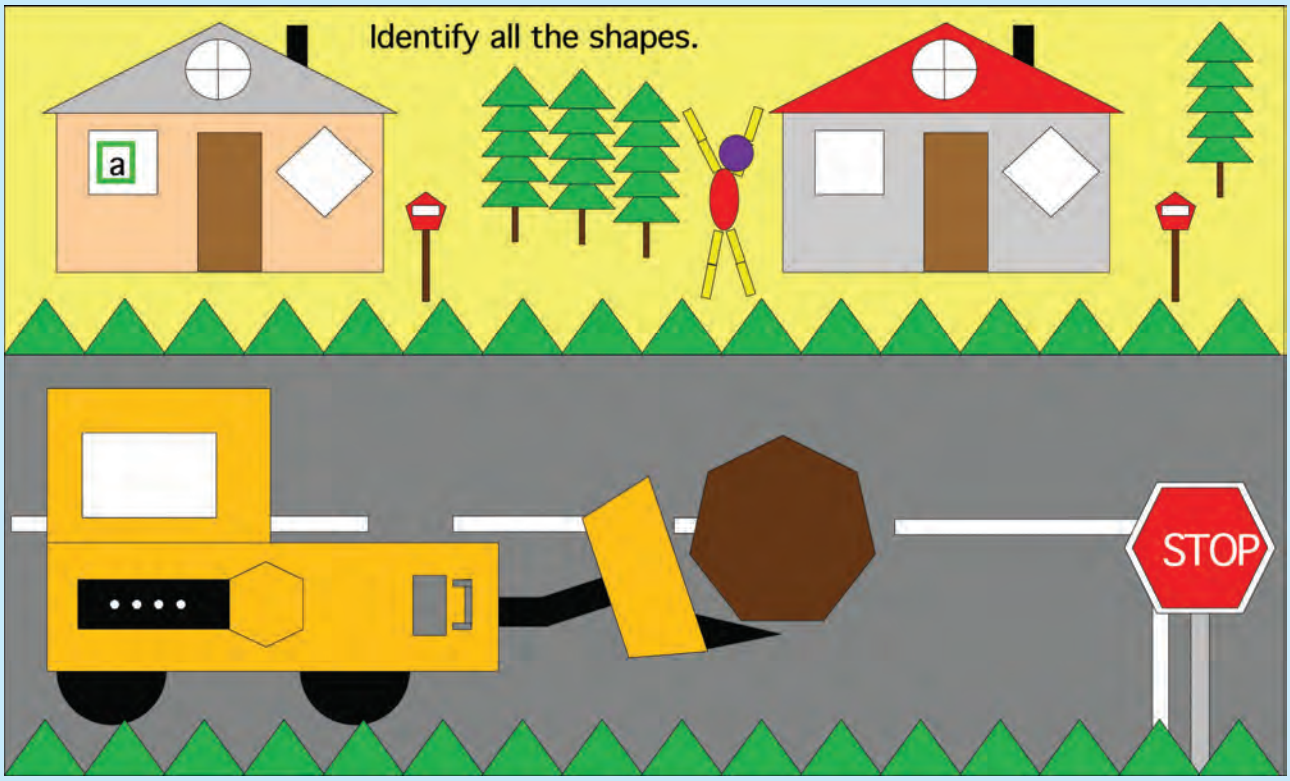
Beautiful objects

How many faces do these objects have?



Polygons and circles

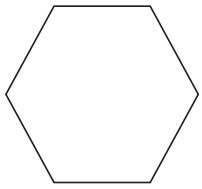
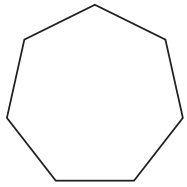
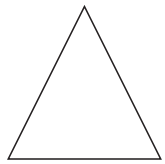
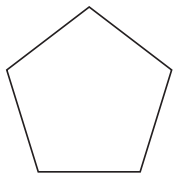
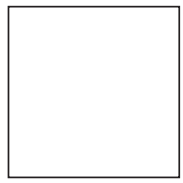
Identify all the shapes.



1. Look at the picture. Write the alphabet letter of the shape on the picture (choose only one shape of each). Complete the table.

Shape	Number of sides	Length of sides
a. Square		
b. Oval		
c. Octagon		
d. Circle		
e. Triangle		
f. Heptagon		
g. Hexagon		
h. Rectangle		

2. Complete the following:

a.  Name: _____ Number of sides: _____ Length of sides: _____	b.  Name: _____ Number of sides: _____ Length of sides: _____	c.  Name: _____ Number of sides: _____ Length of sides: _____
d.  Name: _____ Number of sides: _____ Length of sides: _____	e.  Name: _____ Number of sides: _____ Length of sides: _____	f.  Name: _____ Number of sides: _____ Length of sides: _____

3. Complete the following:

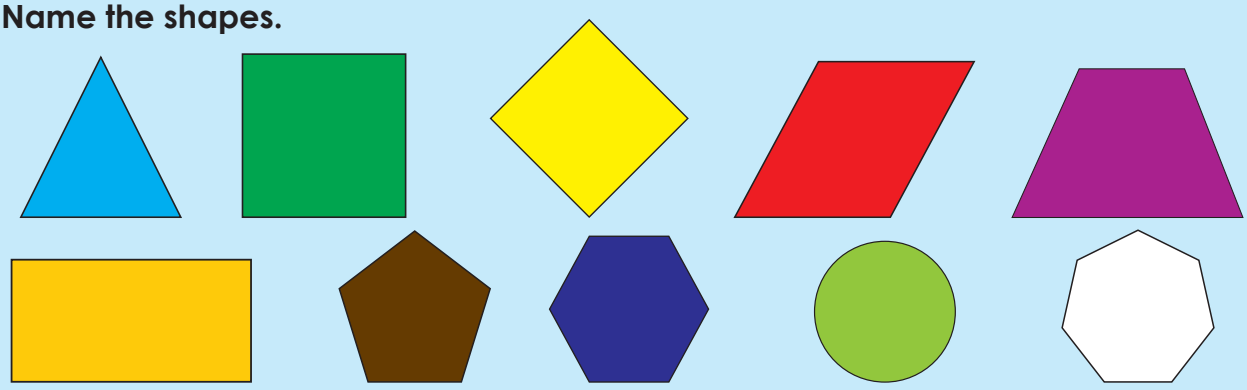
Draw a triangle with sides of 7 cm each.	Draw a hexagon with sides of 3 cm each.

Shape an animal

Create your own picture using each of the shapes at least once: triangle, square, rectangle, pentagon, hexagon, heptagon and circle.

2-D shapes

Name the shapes.

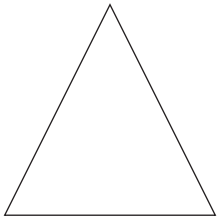
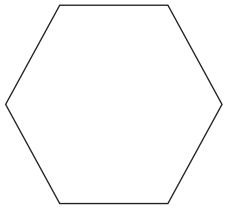
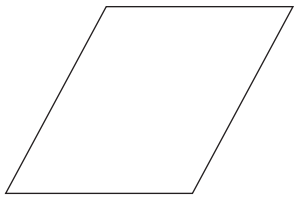
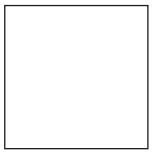
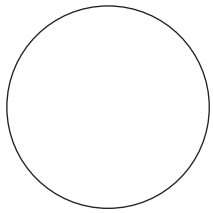
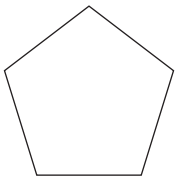
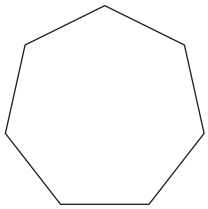
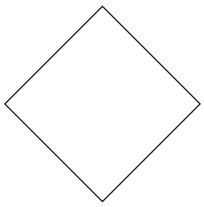
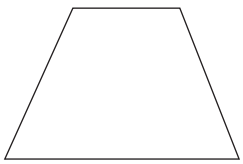


1. Complete the table.

Shape	Name of shape	Straight or curved sides	Number of sides



2. Complete the table.

Shape	Length of sides	Shapes	Length of sides
			
			
			
			
			

Draw a shape

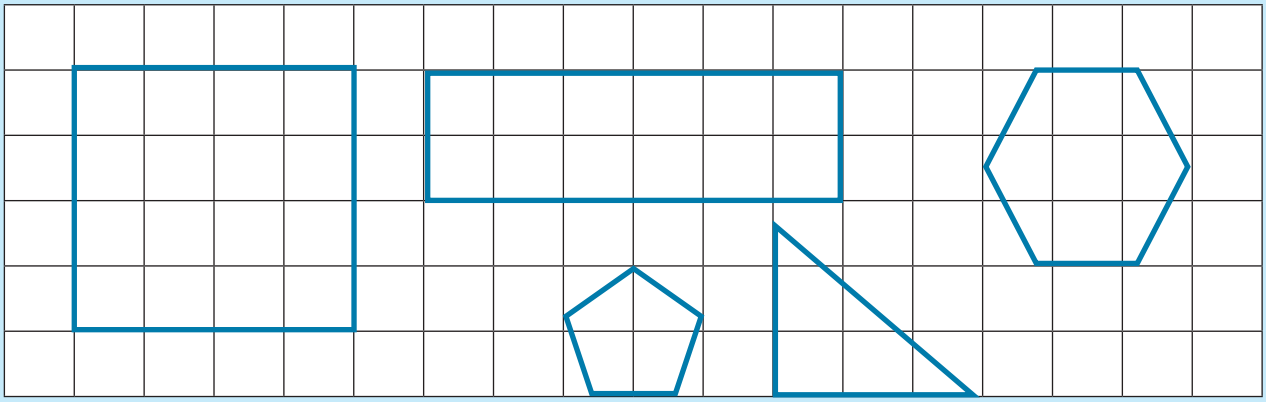
A shape with 4 sides.
Each side is 5 cm.

A shape with 4 sides.
Two sides are 3 cm and
the other two are 4 cm.

A shape with 5 sides.
Each side is 3 cm.

Shapes on Grids

Name the shapes. Why is it easier to draw the shapes using a grid?



1. **Draw the following shapes on the grid.**
   Square, rectangle, triangle, pentagon and hexagon. Remember to use the lines of the grid to guide you. The shapes should also be different in size to the shapes above.

2. **Use 4 squares, 3 rectangles, 2 hexagons, 2 pentagons, and 6 triangles to draw a picture on the grid. Remember to use a ruler to make your picture look as neat as possible. Try to cover most of the grid.**

My dream house

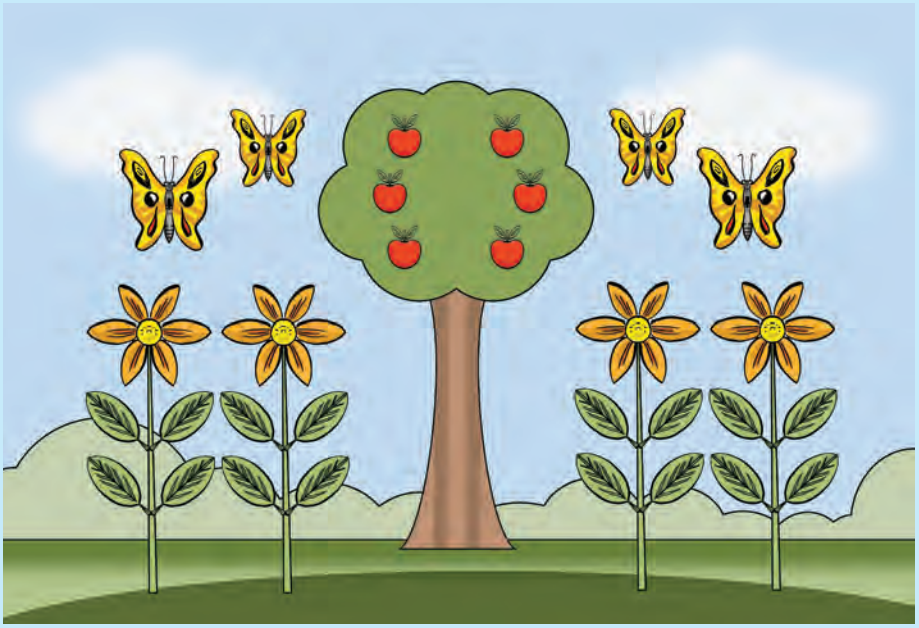
Draw the front of your dream house using grid paper.



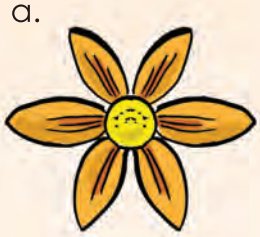
Reflective symmetry

Can you still remember what line symmetry means? Show the objects that are symmetrical.

An object is symmetrical when one half is a mirror image of the other half.



1. Draw a line to show that the object is symmetrical.

a. 

b. 

c. 

d. 

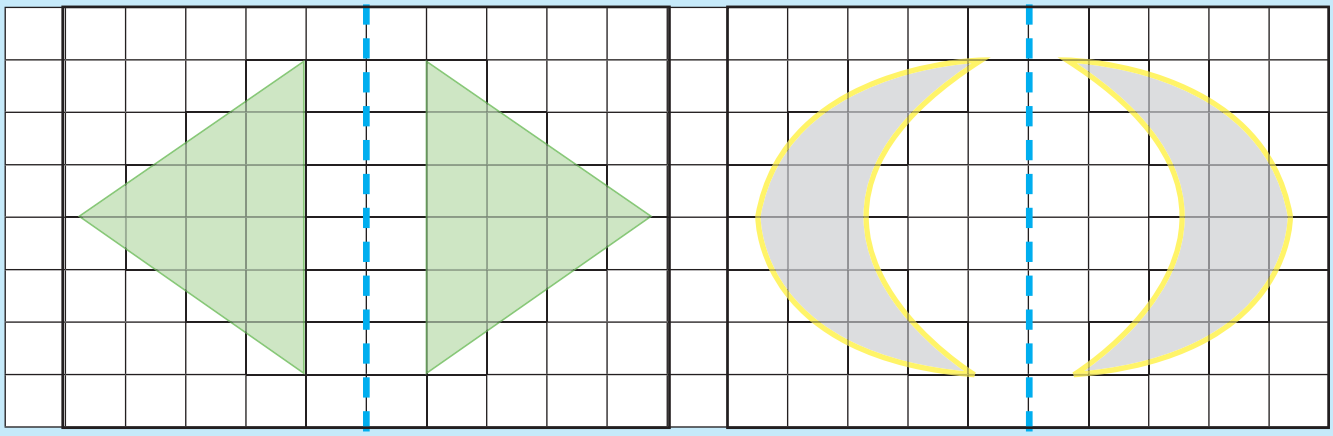
e. 

2. Draw a line of symmetry.

a.	b.	c.
d.	e.	f.

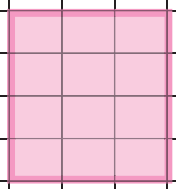
Reflection

What can you tell about the shapes below?

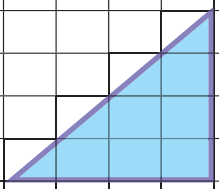


3. Draw the reflection of the shape and show the line of reflection.

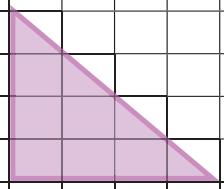
a.



b.



c.

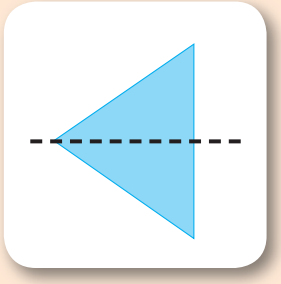


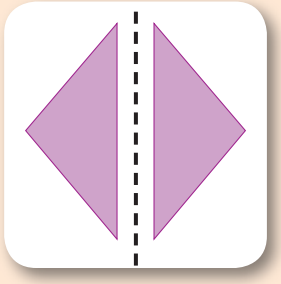
d.

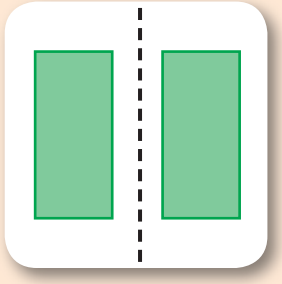


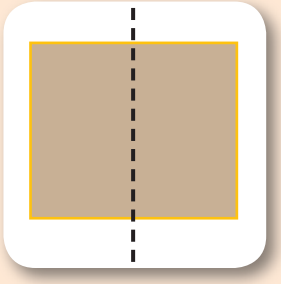
You decide.

For each set of shapes, say whether it is reflective symmetry or reflection.









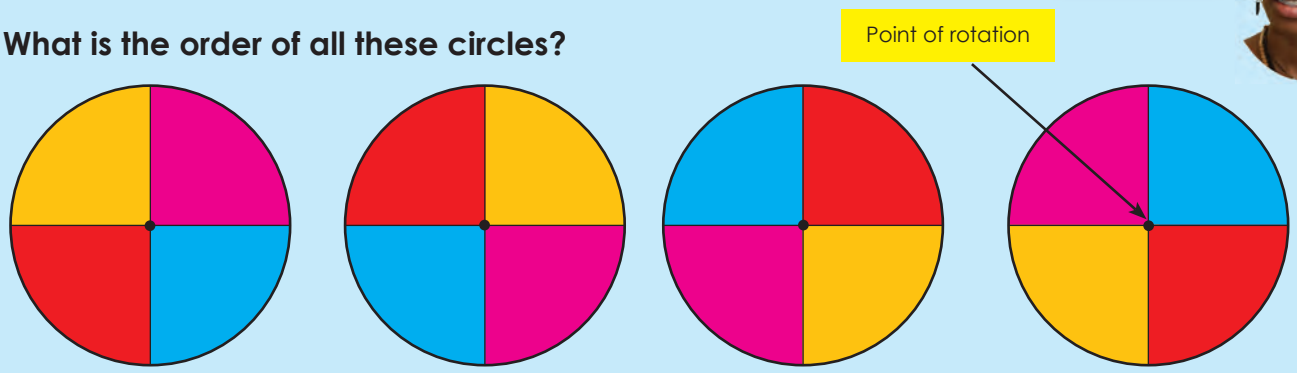
60 Rotational Symmetry

A shape has rotational symmetry if the shape or image can be rotated and it still looks the same. How many matches there are as you go once around is called the order.

Tip: Keep your eye on one colour.



What is the order of all these circles?

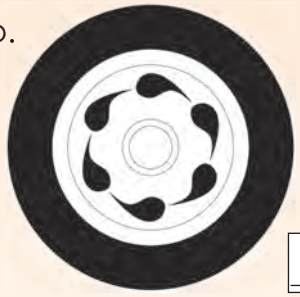


1. What is the order of each of these wheels?

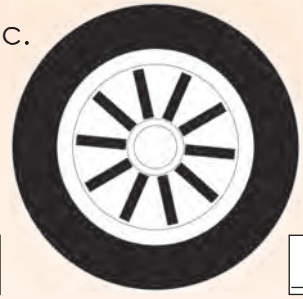
a.



b.

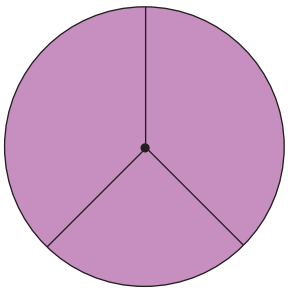


c.

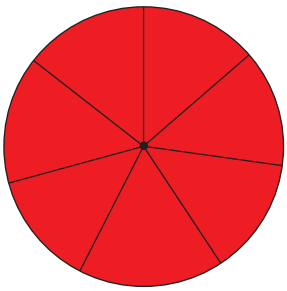


2. What is the order of these circles?

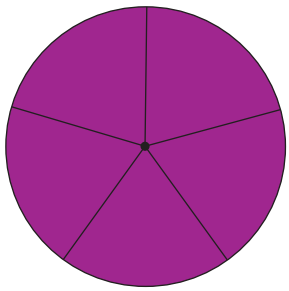
a.



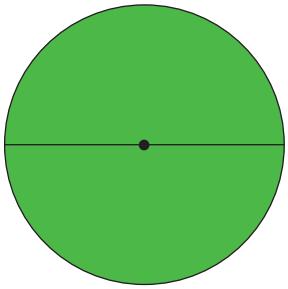
b.



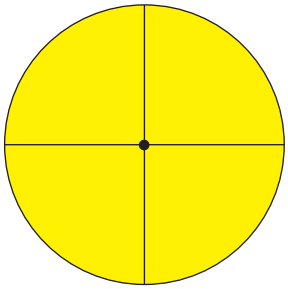
c.



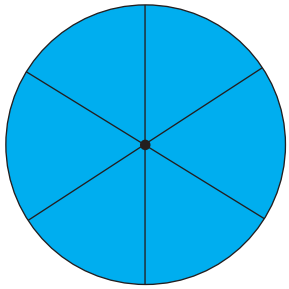
d.



e.

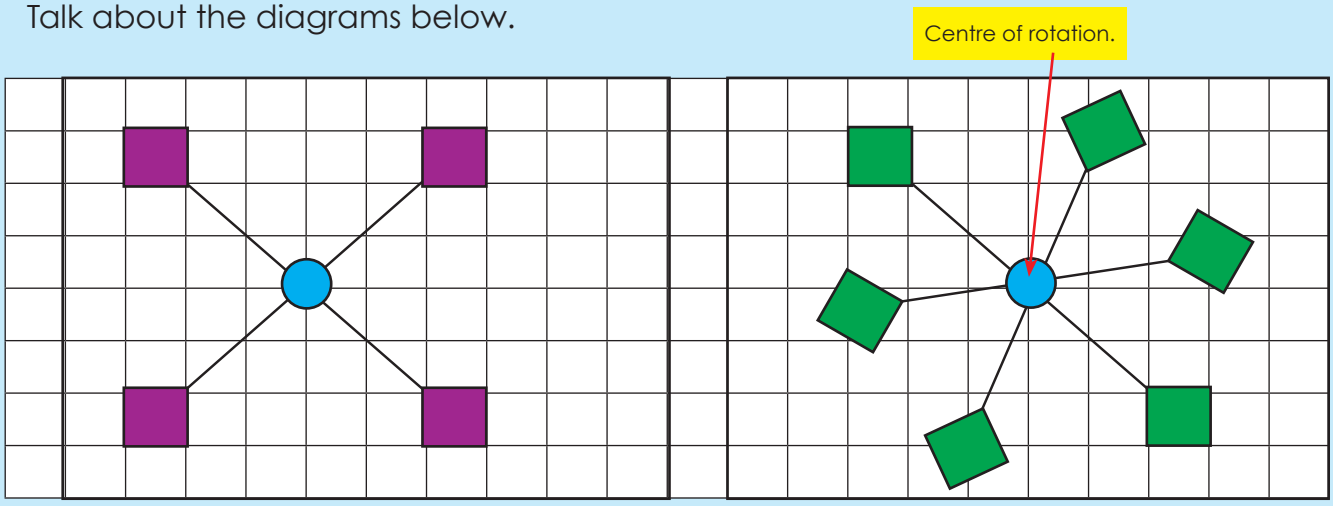


f.



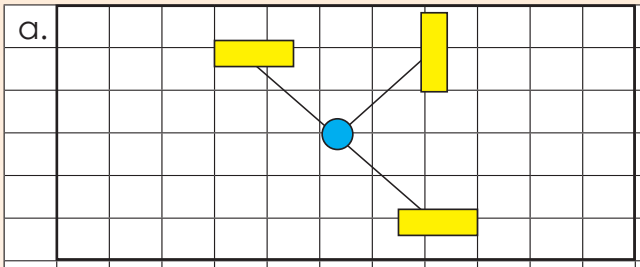
Rotation

Talk about the diagrams below.

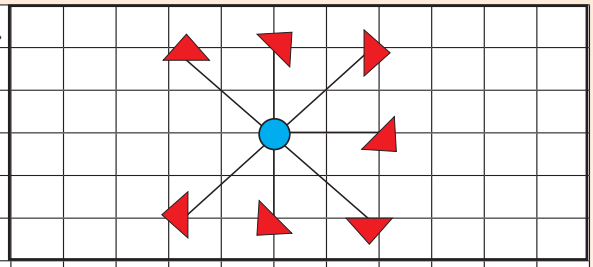


3. Complete the following.

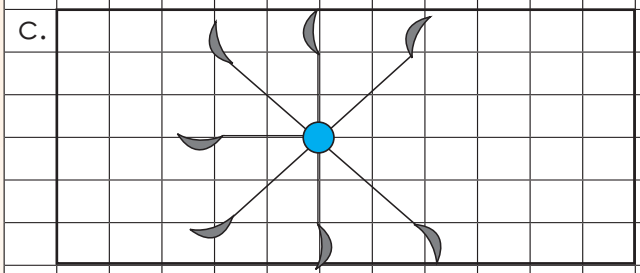
a.



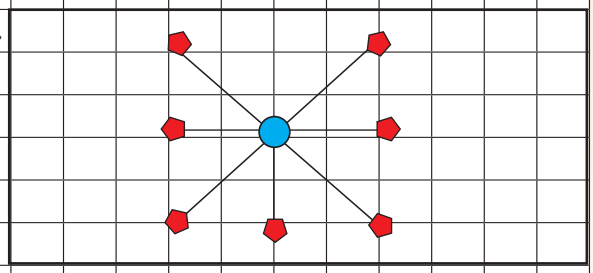
b.



c.

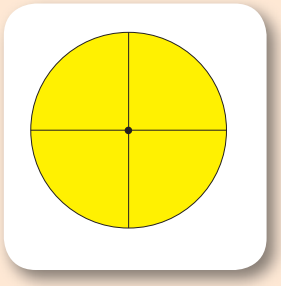


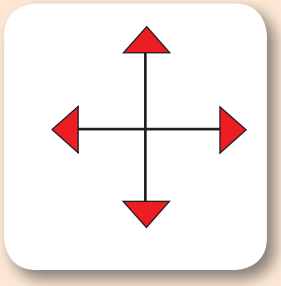
d.

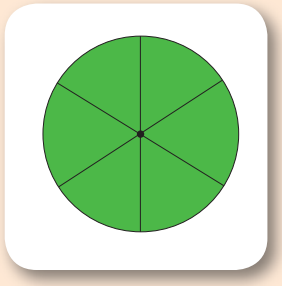


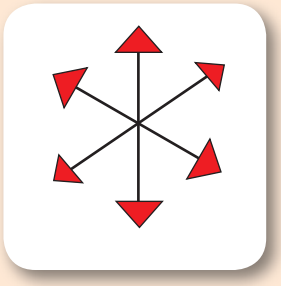
You decide.

For eac set say whether it is rotational symmetry or rotation.





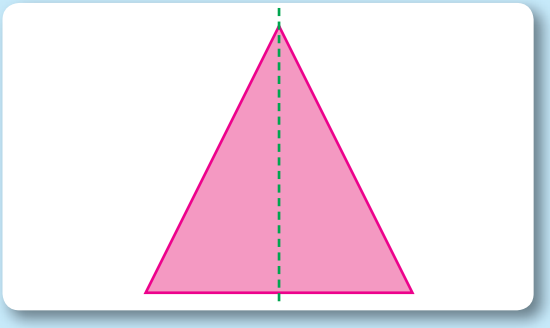


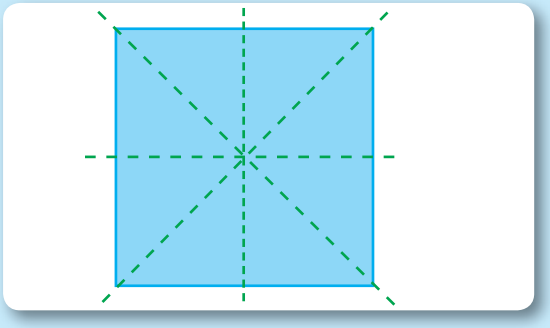


Reflective symmetry and reflection

Reflective symmetry

Look at the lines of symmetry. What do you see? Can you add any lines to the triangle?



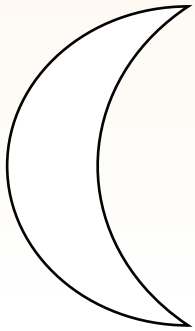


1. Draw all the lines of symmetry on these shapes.

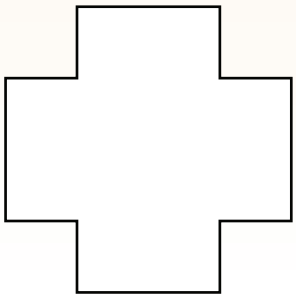
a.	b.	c.
d.	e.	f.

2. Without drawing them, determine how many lines of symmetry the following shapes have?

a. _____



b. _____

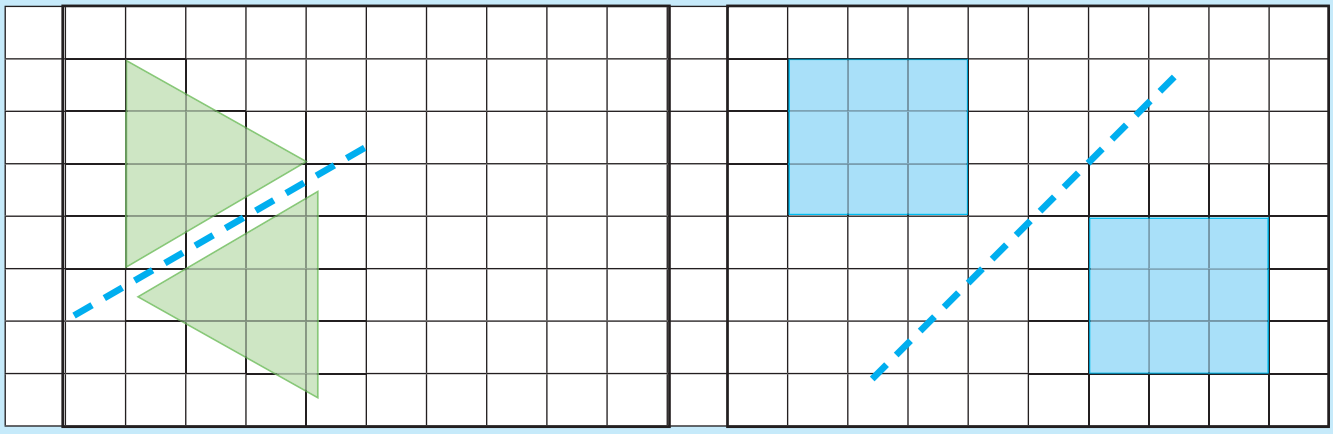


c. _____



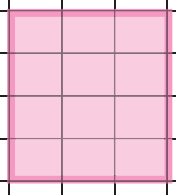
Reflection

Are these lines of reflection? Why or why not?

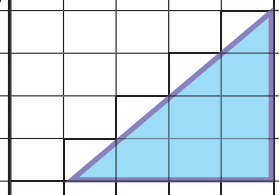


3. Draw the reflection of the shape and show the line of reflection.

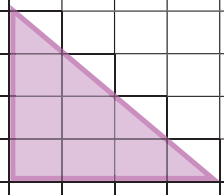
a.



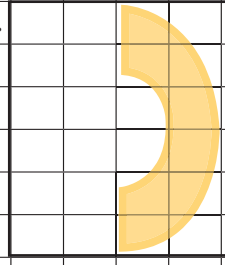
b.



c.



d.



Reflection

Which symbols have reflective symmetry?

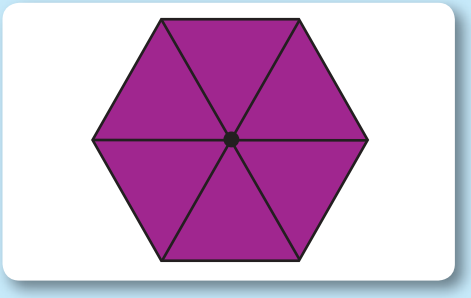


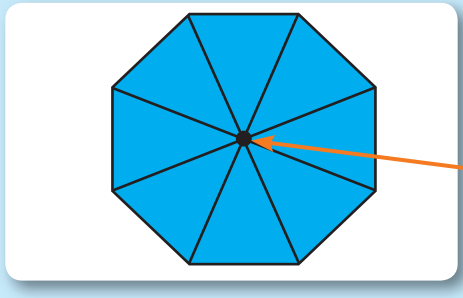
Find at least 5 symbols in your community that have reflective symmetry.

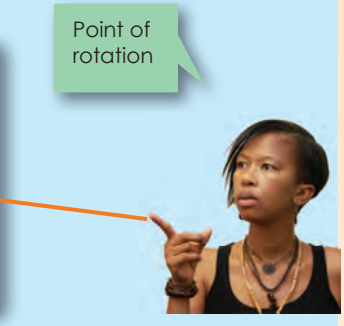
Rotational symmetry and rotation

Rotational symmetry

With rotational symmetry, the shape can be rotated and it still looks the same. How many **matches** there are as you **go around** once is called the **order**. What is the order of these two shapes?

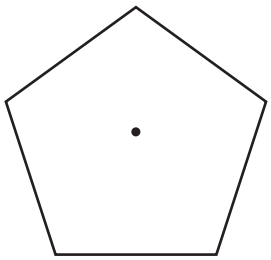




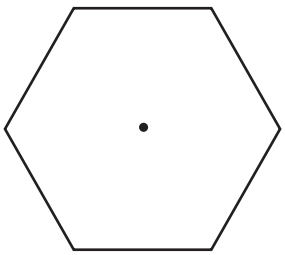


1. What is the order of these shapes?

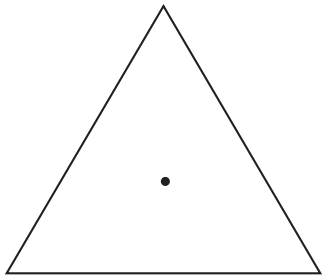
a.



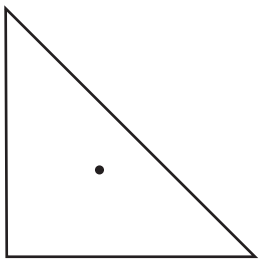
b.



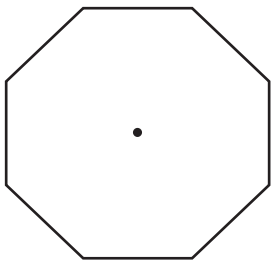
c.



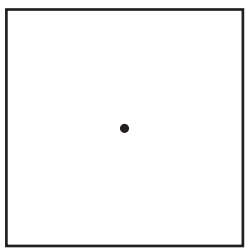
d.



e.



f.



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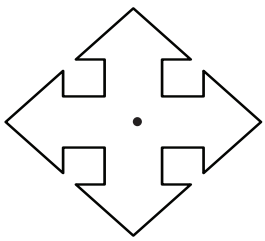

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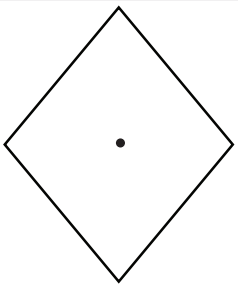
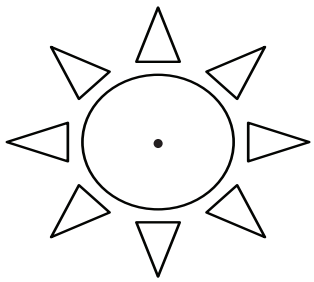
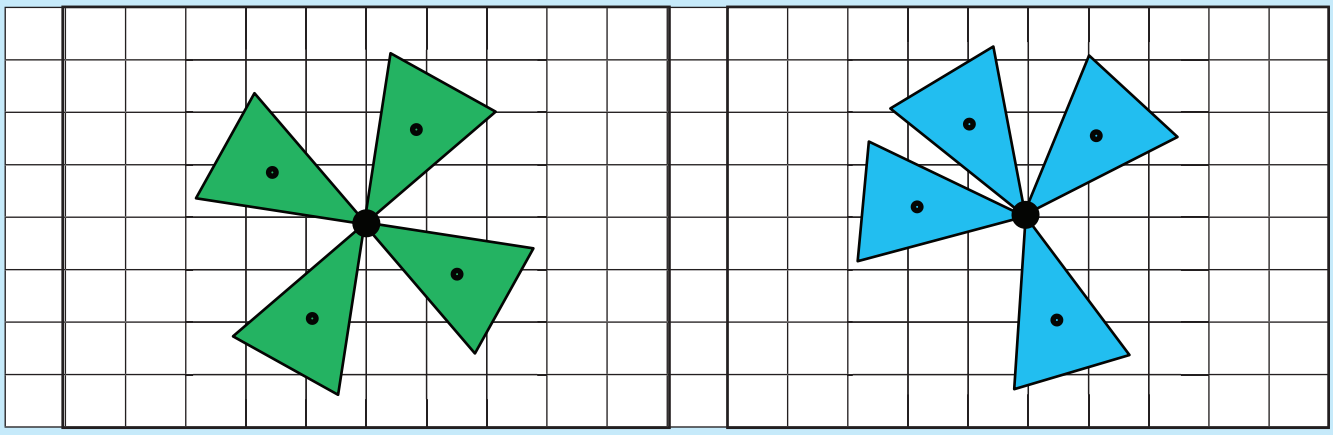


i.



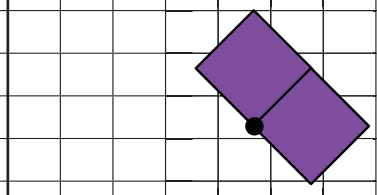
Rotation

Do these shapes have rotational symmetry? Why or why not?

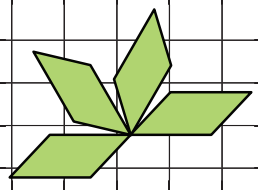


2. Complete the following:

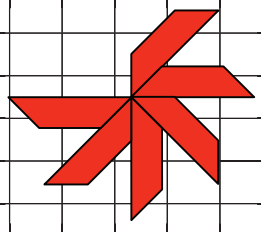
a.



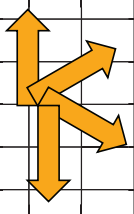
b.



c.



d.



Rotation



We need to look after our environment.

One thing we can do is to recycle.

Make use of old paper or cardboard and design a recycling symbol using rotation.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Sharing and grouping problems

Can you still remember what you did to groups of numbers to make them equal?

7 000	8 000	9 000

Can you move the numbers to make 3 equal groups?

What operation can you use to determine the total?

Make a drawing of your work.

1. Complete the following:

a. Move the numbers to make 3 equal groups.

b. Write down an addition and multiplication sum for each.

i. 300, 400, 500

a. _____

b. _____

_____

ii. 7 000, 8 000, 9 000

a. _____

b. _____

_____

iii. 8 000, 10 000, 12 000

a. _____

b. _____

_____

iv. 14 000, 16 000, 18 000

a. _____

b. _____

_____

v. 3 000, 5 000, 7 000

a. _____

b. _____

_____

vi. 13 000, 15 000, 17 000

a. _____

b. _____

_____

2. Calculate the following:

a. Six groups of 900. _____

b. Five groups of 1 500. _____

c. Twelve groups of 1 200. _____

d. Fifty groups of 300. _____

e. Thirty groups of 80. _____

f. A hundred groups of 200. _____

3. Calculate the following:

a. Share 16 000 between 4. _____

b. Share 15 000 between 3. _____

c. Share 12 000 between 5. _____

d. Share 13 000 between 50. _____

e. Share 12 000 between 30. _____

f. Share 18 000 between 300. _____

Divisibility rules. These divisibility rules will help you with sharing.

A number is divisible by 2 if the last digit is 0, 2, 4, 6 or 8.

A number is divisible by 3 if the sum of the digits is divisible by 3.

A number is divisible by 4 if the number formed by the last two digits is divisible by 4.

A number is divisible by 5 if the last digit is either 0 or 5.

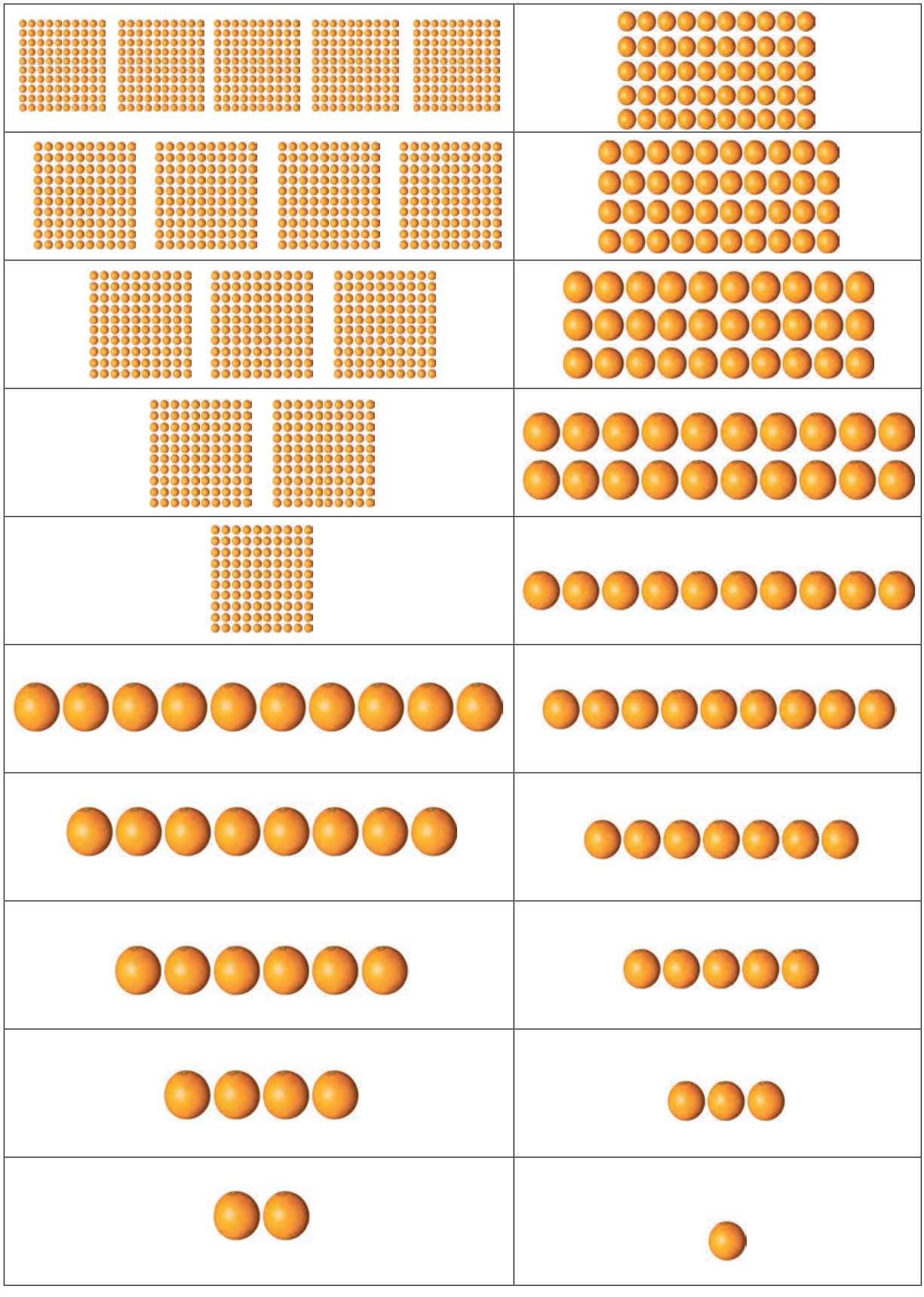
A number is divisible by 10 if the last digit is 0.

continued ☛

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

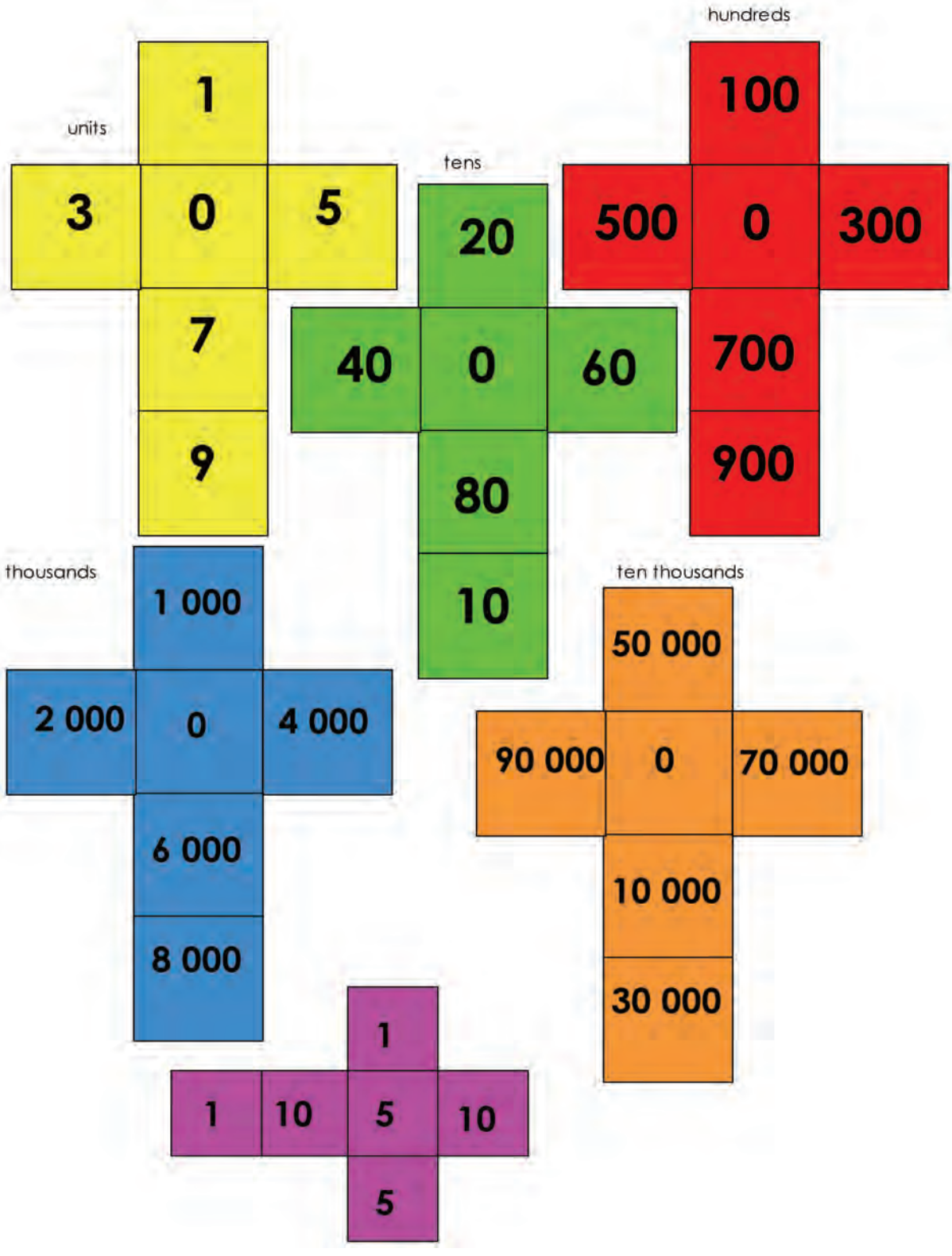
Notes

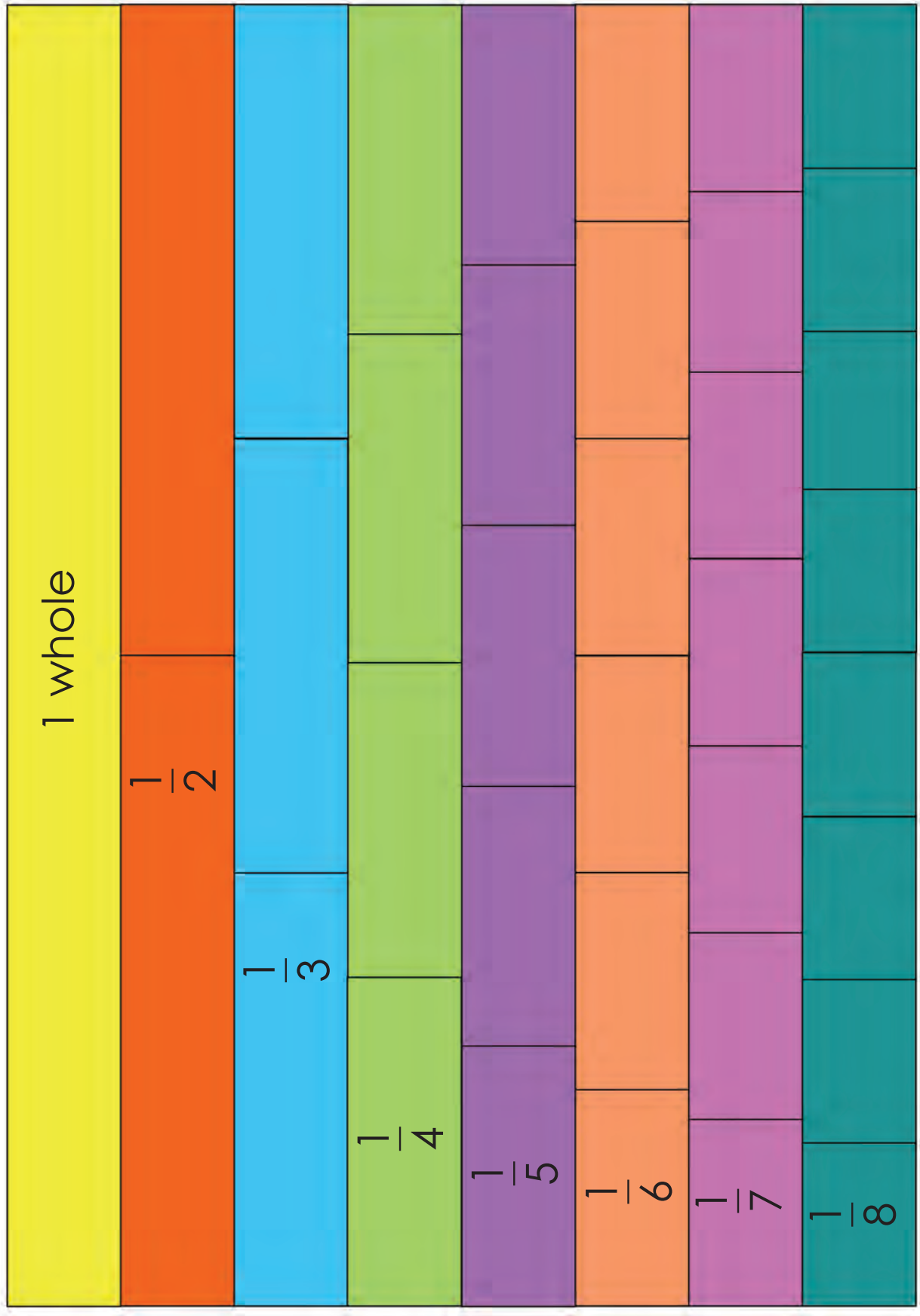
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14



1	10	100	1000
2	20	200	2000
3	30	300	3000
4	40	400	4000
5	50	500	5000
6	60	600	6000
7	70	700	7000
8	80	800	8000
9	90	900	9000

Note: Make dice from these cut-outs. After assembling the dice, keep them in a safe place because you will use them throughout the year.




1 whole
1/2
1/3
1/4
1/5
1/6
1/7
1/8

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$	$\frac{1}{11}$	$\frac{1}{12}$	$\frac{3}{10}$
					
					
					
					
					
					

