

Grade12 Mathematical Literacy: Memorandum Paper 1

- 1.1 $R5\,000,00 \times 0,0868 = €434$ ✓ ✓ ✓ 3
- 1.2.1 $2,4\text{ cm} \times 75\text{ cm} = 180\text{ cm} = 1,8\text{ m}$ ✓ ✓ ✓ 3
- 1.2.2 $14\text{ m} \div 75\text{ m} = 0,186\text{ m} = 18,6\text{ cm}$ ✓ ✓ ✓ 3
- 1.3.1 38 ✓ ✓ 2
- 1.3.2 $5\frac{1}{2}$ ✓ ✓ 2
- 1.3.3 $9\frac{3}{4}\text{ inches} \times 2,54\text{ cm} = 23,81\text{ cm}$ ✓ ✓
This is correct. ✓ 3
- 1.4.1 Outliers ✓ ✓ 2
- 1.4.2 About 40 players ✓ ✓ 2
- 1.4.3 $> 25,5$ ✓ ✓ 2
- 1.4.4 He is definitely in the top quartile. He is closer to the highest batting averages so he compares favourably with the best batsmen in the world. ✓ ✓ 2
- 2.1.1 Accept between R350 and R355 ✓ ✓ 2
- 2.1.2 Accept between R265 and R270 ✓ ✓ 2
- 2.2 $\% \text{ change} = \frac{R329,33 - R320,65}{R320,65} = 2,7\%$ ✓ ✓ ✓ ✓ 4
- 2.3 $0,185 = \frac{R320,65 - x}{x}$ ✓ ✓
 $0,185x = R320,65 - x$
 $1,185x = R320,65$
 $x = R320,65 \div 1,185$ ✓
 $x = R320,65 \div 1,185$
 $x = R270,59$ ✓ 4
- 3.1.1 6th April, 2009 to 4 May, 2009 ✓ ✓ 2
- 3.1.2 R2 000 ✓ ✓ 2
- 3.1.3 -R5 000 ✓ ✓ 2
- 3.1.4 13 ✓ ✓ 2
- 3.2.1 $R5\,000 - R1\,500 = R3\,500$ ✓ ✓ ✓ ✓ 4
- 3.2.2 (a) Athene withdrew R4 000. This caused her bank balance to go from R2 000 to -R2 000. ✓ ✓ ✓
(b) Athene deposited R9 500. This caused her bank balance to go from -R4 500 to R5 000. ✓ ✓ ✓ 6
- 4.1.1 2010 Tax year ✓ ✓ 2
- 4.1.2 R60 086 ✓ ✓ 2
- 4.1.3 10% ✓ ✓ 2
- 4.2.1 R0,00 ✓ ✓ 2
- 4.2.2 R103 ✓ ✓ 2
- 4.2.3 Weekly deduction = 10% of R1 615,51
Weekly deduction = R161,55 ✓ ✓ 2
- 4.2.4 Take Home = $R1\,615,51 - (R103 + R161,55)$ ✓ ✓ ✓
= R1 350,96 ✓ 4
- 4.3.1 $R1\,615,51 = 111\%$ of original wage
Original wage = $R1\,615,51 \div 1,11$
= R1 455,41 ✓ ✓
10% of R1 455,41 = R145,54 ✓
Take Home = $R1\,455,41 - (R27,87 + R145,54)$ ✓
= R1 282,00 ✓ 5
- 4.3.2 $\% \text{ change} = \frac{R1\,350,96 - R1\,282,00}{R1\,282,00} = 5,4\%$ ✓ ✓ ✓ ✓ 4
- 4.3.3 The “take home” percentage increase is less than half of the wage increase of 11%. The reason for this is the increase in the PAYE that the custodian has to pay. Originally he/she paid R27,87 per week which is 1,91% of his/her salary. After the increase he/she pays R103 PAYE per week which is 6,38% of his/her salary. Hence the discrepancy in the “take home” increase and the wage increase. ✓ ✓ ✓ ✓ 4
- 5.1.1 681 km ✓ ✓ 2

- 5.1.2 $455 \text{ km} - 264 \text{ km} = 191 \text{ km}$ ✓ ✓ ✓ 3
- 5.2.1 Time = distance $\div$ speed
Time = $568 \text{ km} \div 80 \text{ km/hr}$ ✓ ✓
= 7,1 hr ✓ ✓
 $\approx 7 \text{ hr}$ ✓ 5
- 5.2.2 Ave petrol consumption = $12 \text{ l} / 100 \text{ km}$
 $568 \text{ km} \div 100 \text{ km} = 5,68 \text{ km}$ ✓
Petrol used = $12 \text{ l} / 100 \text{ km} \times 5,68 \text{ km}$ ✓
= 68,16 l ✓
Cost = $68,16 \text{ l} \times R7,25 = R494,16$ ✓ ✓ 5
- 5.3.1 Middleburg and Cookhouse ✓ ✓ ✓ ✓
OR any other reasonable suggestion 4
- 5.3.2 Dist to Middleburg = $568 \text{ km} - 362 \text{ km}$
= 206 km ✓
Time taken = $206 \text{ km} \div 80 \text{ km/hr}$ ✓
= 2,6 hr = 2 h 36 min. ✓
They will arrive in Middleburg at approximately 09:36 ✓
Dist to Cookhouse = $362 \text{ km} - 175 \text{ km}$
= 187 km
Time taken = $187 \text{ km} \div 80 \text{ km/hr}$ ✓
= 2,3 hr = 2 h 18 min. ✓
They will arrive in Cookhouse at approximately 12:00 or later depending on how long they spent in Middelburg ✓ 6
- 6.1.1 07:03 ✓ ✓ 2
- 6.1.2 No ✓ ✓ 2
- 6.1.3 7 stations ✓ ✓ 2
- 6.1.4 Train leaves Nolungile at 06:54 ✓
Arrives in Ysterplaat at 07:34 ✓
It takes 40 minutes ✓ ✓ 4
- 6.2.1 9516 ✓ ✓
9218 ✓ ✓ 4
- 6.2.2 The next possible train leaves at 07:46 and will arrive in Cape Town at 08:33
✓ ✓ ✓ ✓ 4
- 7.1 (a) 5 ✓ ✓
(b) 5 ✓
(c) 1 ✓
(d) 0 ✓
(e) 1 ✓
(f) 0 ✓ 7
- 7.2.1 2 games ✓ ✓
- 7.2.2 Junction Rovers have only 1 game left to play. If they win then they will get the maximum number of points which will be 3. ✓ ✓
Hence the maximum number of points that they can end the competition with is 3. ✓ 3
- 7.3.1 (a) Ajax Cape Town **wins** and Bay United loses ✓
(b) Ajax Cape Town **draws** and Bay United draws ✓
(c) Ajax Cape Town loses and Bay United wins ✓ ✓ ✓ ✓
- 7.3.2 (a) Ajax Cape Town 6 and Bay United 2 ✓ ✓
(b) Ajax Cape Town 5 and Bay United 4 ✓ ✓
(c) Ajax Cape Town 3 and Bay United 5 ✓ ✓ 6
- 7.4 The maximum points that Junction Rovers can end the tournament are 3.
WP United already has 5 points which means that Junction Rovers cannot be placed in position 1. ✓
In each of the three scenarios in the Ajax Cape Town vs. Bay United game one of the teams ends with more than 3 points which means that Junction Rovers cannot be placed in position 2. ✓ ✓
Hence the likelihood of Junction Rovers ending in position 1 or 2 is nil. (impossible) ✓ 4