JOHANNESBURG WEST DISTRICT

CONTROLLED TEST

GRADE 11

MATHEMATICAL LITERACY

04 SEPTEMBER 2024

MARKING GUIDELINES

Stanmorephysics.com

MARKS: 50

Codes	Explanation
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
MCA	Method with Consistent Accuracy
A	Accuracy
C	Conversion
D	Define
J	Justification/Reason/Explain
S	Simplification
RD	Reading from a table OR a graph OR a diagram OR a map OR a plan
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding Off
NP	No penalty for rounding OR omitting units

These marking guidelines consist of 4 pages.

Copyright reserved

QUESTION 1 [10 Marks]		
Q	**Solution**	**Explanation**
1.1	A floor plan is a line drawing showing rooms as though seen from above without a roof/the design and dimensions of the inside of a building. ✓✓A *(Accept any sensible/logical explanation/definition)*	2A correct definition (2)
1.2	Door ✓✓A	2A correct answer (2)
1.3	Elevation map ✓✓A	2A correct answer (2)
1.4	One unit on the map represents 100 000 units in reality ✓✓A	2A correct answer (2)
1.5	True ✓✓A	2A correct answer (2)
		[10]

QUESTION 2 [5 Marks]

Term	**Principal amount**	**Calculating interest** ✓MA	**Final amount**
1st half year	R50 000	5% of R50 000 = R2 500	R50 000 + R2 500 = R52 500 ✓A
2nd half year	R52 500	5% of R52 500 = R2 625	R52 500 + R2 625 = R55 125 ✓CA
3rd half year	R55 125	5% of R55 125 = R2 756,25	R55 125 + R2 756,25 = R57 881,25 ✓CA
4th half year	R57 881,25	5% of R57 881,25 = R2 894,06	R57 881,25 + R2 894,06 = R60 775,31 ✓CA

1MA correct concept of compound interest
1A answer first half.
1CA answer 2nd half.
1CA answer 3rd half.
1CA answer 4th half.

Copyright reserved

QUESTION 3 [9 Marks]		
Q	**Solution**	**Explanation**
3.1	Northwest or NW ✓✓A	2A correct answer (2)
3.2	Travel from Johannesburg to Zeerust via Koster/Swartruggens, then then from Zeerust to Abjaterskop Gate. ✓✓A **OR** Take the N14, turn on to the N4, then turn on to the R49. ✓✓A	2A correct answer (2)
3.3	✓MA ✓MA Distance = 221,2 km – (62,4 km + 88,1km) = 70,7 km ✓A	1MA for subtracting 62,4 km 1MA for subtracting 88,1 km 1A final answer (3)
3.4	✓MA ✓A Via Koster: 70 km + 71,9 km + 35,2 km = 177,1 km	1MA adding all three correct values 1A final answer **AO** (2)
		[9]

Stanmorephysics.com

QUESTION 4 [17 Marks]		
Q	**Solution**	**Explanation**
4.1	Left ✓✓A	2A correct answer (2)
4.2	Time = $\frac{\textbf{Distance}}{\textbf{Speed}}$ ✓MA = $\frac{\textbf{662 km}}{\textbf{120 km/h}}$ ✓SF = 5,516666667 hours ✓CA ✓C $\therefore$ $\textbf{5 hours} + (\textbf{0,516666667} \times \textbf{60})$ ✓CA ✓CA = 5 hours, 31 minutes	1MA changing the subject of the formula 1SF substitution 1CA time in hours 1C conversion 1CA time in hours 1CA time in minutes (6)

✓RT *Marking Guidelines*

4.3	Return trip = 662 km × 2 ✓M = 1 324 km ✓CA ∴ **1 324 *km* ≠ 1 375 *km*** ✓M ✓J ∴ ***His statement is NOT VALID.***	1RT for 662 km 1M for times by 2 1CA answer 1M comparison of distances 1J justification (5)
4.4	✓A = 1 324 km × $\frac{7,8}{100}$ × R23,11 ✓MA ✓MA = R2 386,62✓CA	**CA from Q4.3** 1A for correct return distance 1MA for multiplying by 7,8 and dividing by 100 1MA multiplying by R23,11 1CA final answer (4)
		[17]

QUESTION 5 [9 Marks]		
Q	**Solution**	**Explanation**
5.1	Number of boxes using Option 1 ✓MA = $\frac{5\ m}{1,2\ m} \times \frac{6,5\ m}{0,7\ m}$ ✓MA = 4 × 9 ✓MCA = 36 boxes ✓CA	1MA for 5 divided by 1,2 1MA for 6,5 divided by 0,7 1MCA multiplying 1CA final answer (4)
5.2	Number of boxes using Option 2 ✓MA = $\frac{5\ m}{0,7\ m} \times \frac{6,5\ m}{1,2\ m}$ ✓MA ✓MCA = 7 × 5 = 35 boxes ✓CA Option 1 will enable packaging of more boxes. The claim is invalid. ✓J	1MA for 5 divided by 0,7 1MA for 6,5 divided by 1,2 1MCA multiplying 1CA final answer 1J justification (5)
		[9]
TOTAL: 50		