



**GAUTENG PROVINCE**  
EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GAUTENG DEPARTMENT OF EDUCATION  
PROVINCIAL EXAMINATION  
NOVEMBER 2017  
GRADE 6**

**MATHEMATICS**

**MEMORANDUM**

**8 pages**

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PROVINCIAL EXAMINATION**

**MATHEMATICS**

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**General marking note:**

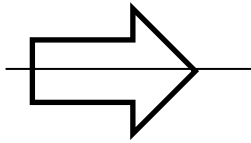
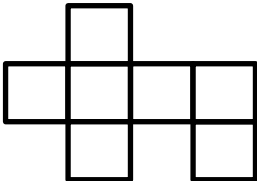
1. Give full marks for answers only, unless otherwise stated.
2. Accept any alternative correct solution that is not included in the memorandum.
3. CA refers to consistent accuracy. See clarification in Question 3.3.

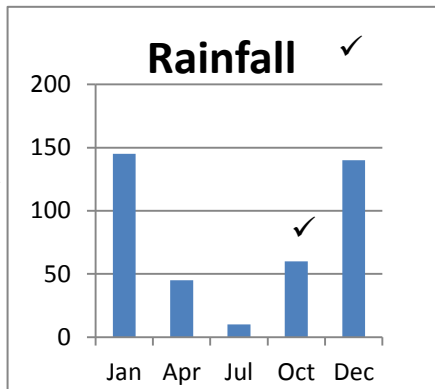
QUESTION	EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
1	1.1	A✓	1	
	1.2	D✓	1	
	1.3	A✓	1	
	1.4	B✓	1	
	1.5	C✓	1	
	1.6	B✓	1	
	1.7	A✓	1	
	1.8	A✓	1	
	1.9	D✓	1	
	1.10	D✓	1	
				10
2	2.1	3✓	1	
	2.2	45✓ 90✓	2	
	2.3	61✓ 67✓	2	
				5

QUESTION	EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL	
3	3.1	$\begin{array}{r} 12\ 573\ 005 \\ +\ 9\ 815\ 832 \\ \hline 22\ 388\ 837 \\ \quad \checkmark \quad \checkmark \end{array}$	Correct answer: 2 marks 837: 1 mark 22 388: 1 mark  Accept any other alternative correct method.	2	
	3.2	$\begin{array}{r} 28\ 833\ 956 \\ -\ 14\ 357\ 321 \\ \hline 14\ 476\ 635 \\ \quad \checkmark \quad \checkmark \end{array}$	Correct answer: 2 marks  635: 1 mark 14 476: 1 mark  Accept any other alternative correct method.	2	
	3.3	$\begin{array}{r} 6\ 822 \\ \times\ 24 \\ \hline 27\ 288\ \checkmark \\ +\ 136\ 440\ \checkmark \\ \hline 163\ 728\ \checkmark \end{array}$ <p><u>Example of CA:</u></p> $\begin{array}{r} 6\ 822 \\ \times\ 24 \\ \hline 27\ 320\ \times\ (1^{\text{st}}\ \text{step incorrect}) \\ +\ 136\ 440\ \checkmark\ (2^{\text{nd}}\ \text{step correct}) \\ \hline 163\ 760\ \checkmark\ (2\ \text{steps added correctly}) \end{array}$	Correct answer: 3 marks  27 288: 1 mark 136 440: 1 mark Correctly adding steps: 1 mark  Accept any other alternative correct method including Napier's Bones method.  Apply CA	3	
	3.4	$\begin{array}{r} \underline{218\checkmark}\ \text{rem } 22 \\ 45\ )\ 9\ 832 \\ \underline{-\ 90\checkmark} \\ 83 \\ \underline{-\ 45} \\ 382 \\ \underline{360} \\ 22\checkmark \end{array}$	Correct answer 3 marks  218: 1 mark 90: 1 mark 22: 1 mark  Apply CA  Accept any other alternative correct method.	3	

QUESTION	EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
3.5	$= 30 + 5 \times 2$ $= 30 + 10 \checkmark$ $= 40 \checkmark$	Correct answer 2 marks  Multiplying 5 by 2: 1 mark  40: 1 mark  Apply CA	2	
3.6	$= \frac{6}{9} \checkmark + \frac{1}{9}$ $= \frac{7}{9} \checkmark$	Correct answer: 2 marks  Converting the fractions to have the same denominators: 1 mark  $\frac{7}{9}$ : 1 mark  Accept any other alternative correct method, and any answer that is equivalent.  Apply CA	2	
3.7	$= \frac{27}{5} - \frac{14}{5} \checkmark$ $= \frac{13}{5} \checkmark$ OR $2 \frac{3}{5}$  OR  $= 3 \frac{2}{5} - \frac{4}{5} \checkmark$  $= 2 \frac{3}{5} \checkmark$	Correct answer: 2 marks  Convert to improper fractions: 1 mark  Correctly subtracting the numerators: 1 mark.  Accept any other alternative correct method, and any answer that is equivalent.  Apply CA	2	

QUESTION	EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
3.8	$= 140 \div 5 \checkmark \times 4$ $= 112 \checkmark$ or $140 \times 4 \div 5$ $= 112$	Correct answer 2 marks  Divide 140 by 5: 1 mark  112: 1 mark  Apply CA	2	
3.9	$\begin{array}{r} 7,58 \\ + 4,16 \\ \hline 11,74 \end{array} \checkmark$	Correct answer: 2 marks  Correct alignment of digits : 1 mark  11,74 : 1 mark  No marks if the comma is left out	2	
3.10	$1\ 345$ $\checkmark$		1	21
4	$0,2 \checkmark$  $60\% \checkmark$  $\frac{1}{4} \checkmark$	Accept any fraction equivalent to $\frac{1}{4}$ in the 3 <sup>rd</sup> line.		3
5	Rectangular prism $\checkmark$  $8 \checkmark$  $6 \checkmark$			3
6	6.1	Parallelogram $\checkmark$	1	
	6.2	Octagon $\checkmark$	1	2

QUESTION	EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
7	 ✓	1 Horizontal line: 1 mark.  Do not penalize the learner for not using a ruler.		1
8	 ✓	Do not penalize the learner for not using a ruler.		1
9	Rotation ✓ or Turn			1
10	10.1	8,3 ✓ Kg	1	3
	10.2	7 050 ✓ ml	1	
	10.3	40 ✓ decades	1	
11	$= 430 \text{ cm} - 80 \text{ cm} \checkmark$ $= 350 \text{ cm} \checkmark$  Or  $= 4,3 \text{ m} - 0,8 \text{ m}$ $= 3,5 \text{ m}$	Correct answer : 2 marks.  Convert to the same units: 1 mark  350 cm or 3,5 m : 1 mark.		2
12	$35 \text{ minutes} + 40 \text{ minutes} = 75 \text{ minutes}$ or 1 hour 15 minutes ✓  $4:30 + 1 \text{ hour } 15 \text{ minutes} = 5:45 \text{ pm}$ or 17:45 ✓  Or  $4:30 + 35 \text{ minutes} = 5:05 \text{ or } 17:05 \checkmark$  $5:05 + 40 \text{ minutes} = 5:45 \text{ or } 17:45 \checkmark$	Correct answer: 2 marks  Calculate total time for homework or add times to 4:30: 1 mark  5:45 or 17:45: 1 mark		2

QUESTION		EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
13	13.1	20 cm or 20✓	20: 1 mark.  Do not penalize the learner for not writing the unit.	1	3
	13.2	4 rows of 3 tiles each or $4 \times 3$ or Drawing of grid ✓  12 ✓ tiles	Correct answer: 2 marks  Calculation or drawing: 1 mark  12: 1 mark.	2	
14		100 ✓ 15 ✓	100 desks 15 classrooms		2
15	15.1	31 ✓		1	2
	15.2	11 ✓		1	
16	16.1	Speeding and reckless driving✓		1	4
	16.2	$\frac{1}{8}$ ✓		1	
	16.3	$\frac{3}{4}$ ✓ = 75% ✓	Correct answer: 2 marks  $\frac{3}{4}$ : 1 mark  75% : 1 mark  Apply CA	2	
17		 <p>✓</p>	Appropriate title: 1 mark  Appropriate scale in y axis : 1 mark  5 Approximately accurate drawn bars : 1 mark		3

QUESTION		EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
18		20% of R600 = R120 ✓  R600 – R120 = R480 ✓	Correct answer: 2 marks  Calculate 20% of R600: 1 mark  R480 : 1 mark  Apply CA		2
19	19.1	7 necklaces in $\frac{1}{2}$ hour ✓  $14 \times 3 + 7 = 49$ ✓ necklaces	Correct answer: 2 marks  Calculate how many necklaces in half an hour: 1 mark  49:1 mark  Apply CA	2	
	19.2	Red : Yellow 3 : 2 9 : 6  6 Yellow beads.	6: 1 mark	1	3
20		Remove a cube from each side of the scale, then 2 cylinders will have the same mass as 1 cone. The cone is 6 kg, therefore the cylinders will each be $6 \div 2 = 3$ kg.  2 cylinders = 6 kg ✓ 1 cylinder = 3 kg ✓	Correct answer: 2 marks  Calculates mass of 2 cylinders: 1 mark  Divides mass by 2: 1 Mark  Apply CA		2
<b>TOTAL:</b>					<b>75</b>