



GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

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

MATHEMATICS

MEMORANDUM

9 pages

GAUTENG DEPARTMENT OF EDUCATION
PROVINCIAL EXAMINATION

MATHEMATICS

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.

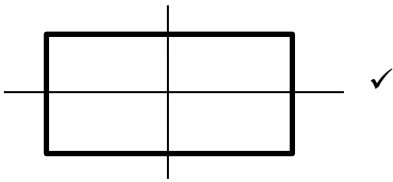
QUESTION	EXPECTED ANSWER		CLARIFICATION	MARK	TOTAL
1	1.1	B✓		1	10
	1.2	B✓		1	
	1.3	D✓		1	
	1.4	B✓		1	
	1.5	A✓		1	
	1.6	B✓		1	
	1.7	C✓		1	
	1.8	C✓		1	
	1.9	D✓		1	
	1.10	D✓		1	
2	2.1	a	19 460✓		1
		b	28 000✓		1
	2.2	a	30✓	No marks may be awarded if the learner wrote more than 1 number.	1
		b	37✓		1
		c	4✓		1
	2.3	10✓		1	6

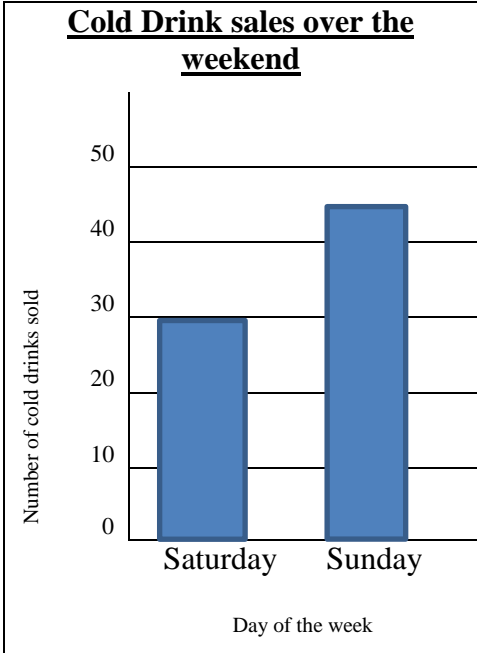
3	3.1	$\begin{array}{r} 348143 \\ +594845 \\ \hline 942988 \\ \checkmark \quad \checkmark \end{array}$	<p>Correct answer: 2 marks</p> <p>942: 1 mark 988: 1 mark</p> <p>Accept any other alternative correct method.</p>	2	
	3.2	$\begin{array}{r} 98268 \\ -95931 \\ \hline 2337 \\ \checkmark \quad \checkmark \end{array}$	<p>Correct answer: 2 marks</p> <p>37: 1 mark 23: 1 mark</p> <p>Accept any other alternative correct method.</p>	2	
	3.3	$\begin{array}{r} 5463 \\ \times 35 \\ \hline 27315 \checkmark \\ + 163890 \checkmark \\ \hline 191205 \checkmark \end{array}$ <p><u>Example of CA:</u></p> $\begin{array}{r} 5463 \\ \times 35 \\ \hline 27320 \times \text{ (1st step incorrect)} \\ + 163890 \checkmark \text{ (2nd step correct)} \\ \hline 191205 \checkmark \text{ (2 steps added correctly)} \end{array}$	<p>Correct answer: 3 marks</p> <p>27 315: 1 mark 163 890: 1 mark Correctly adding steps: 1 mark</p> <p>Accept any other alternative correct method including Napier's Bones method.</p> <p>Apply CA.</p>	3	
	3.4	$\begin{array}{r} \underline{302} \checkmark \text{ rem } 7 \\ 25 \overline{)7557} \\ \underline{-75} \checkmark \\ 057 \\ \underline{-50} \\ \underline{\quad 7} \checkmark \end{array}$	<p>Correct answer: 3 marks</p> <p>302: 1 mark 75: 1 mark 7: 1 mark</p> <p>Apply CA.</p> <p>Accept any other alternative correct method.</p>	3	

3.5	$= 3 + 4 + \frac{2}{9} + \frac{5}{9}$ $= 7\checkmark \frac{7}{9}\checkmark$	<p>Correct answer: 2 marks</p> <p>7: 1 mark</p> <p>$\frac{7}{9}$: 1 mark</p> <p>Accept any other alternative correct method, and any answer that is equivalent.</p> <p>Apply CA.</p>	2	
3.6	$\frac{9}{10} - \frac{4}{10} \checkmark$ $= \frac{5}{10} \checkmark \text{ OR } \frac{1}{2}$	<p>Correct answer: 2 marks</p> <p>Converting so that fractions have a common denominator: 1 mark</p> <p>Correctly subtracting the numerators: 1 mark.</p> <p>Accept any other alternative correct method, and any answer that is equivalent.</p> <p>Apply CA.</p>	2	
3.7	$= 91 \div 7 \checkmark \times 3$ $= 39 \checkmark$	<p>Correct answer: 2 marks</p> <p>Dividing 91 by 7: 1 mark</p> <p>39: 1 mark</p> <p>Apply CA.</p>	2	

3.8	$\begin{array}{r} 9,45 \\ + 3,2 \\ \hline 12,65 \end{array} \checkmark$	<p>Correct answer: 2 marks</p> <p>Correct place value: 1 mark</p> <p>12,65 : 1 mark</p> <p>No marks to be awarded for the final answer if there is no comma.</p>	2																						
3.9	$54 \div 6 \checkmark + 4$ $= 9 + 4$ $= 13 \checkmark$	<p>Correct answer: 2 marks</p> <p>Calculating brackets 1st: 1 mark</p> <p>13: 1 mark</p> <p>Apply CA.</p>	2	20																					
4	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">$\frac{3}{10}$</td> <td style="padding: 5px;">0,3</td> <td style="padding: 5px;">30% ✓</td> </tr> <tr> <td style="padding: 5px;">$\frac{3}{4}$</td> <td style="padding: 5px;">0,75 ✓</td> <td style="padding: 5px;">75%</td> </tr> <tr> <td style="padding: 5px;">$\frac{1}{2} \checkmark$</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Or</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">$\frac{5}{10}$</td> <td style="padding: 5px;">0,5</td> <td style="padding: 5px;">50%</td> </tr> <tr> <td style="padding: 5px;">Or</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">$\frac{50}{100}$</td> <td></td> <td></td> </tr> </table>	$\frac{3}{10}$	0,3	30% ✓	$\frac{3}{4}$	0,75 ✓	75%	$\frac{1}{2} \checkmark$			Or			$\frac{5}{10}$	0,5	50%	Or			$\frac{50}{100}$			<p>30% : 1 mark 0,75 : 1 mark</p> <p>$\frac{1}{2}$ OR $\frac{5}{10}$ OR $\frac{50}{100}$:</p> <p>1 mark.</p> <p>Accept any fraction equivalent to $\frac{1}{2}$ in the 3rd line.</p>	3	20
$\frac{3}{10}$	0,3	30% ✓																							
$\frac{3}{4}$	0,75 ✓	75%																							
$\frac{1}{2} \checkmark$																									
Or																									
$\frac{5}{10}$	0,5	50%																							
Or																									
$\frac{50}{100}$																									

5	5.1		<p>5 : 1 mark 21 : 1 mark</p>	2	
	5.2		<p>+ 2: 1 mark. No marks if the learner did not include the plus sign.</p>	1	3
6	6.1	3✓	<p>Award a mark if the learner draws 3 matches to add another square, instead of writing the number 3.</p>	1	
	6.2	31✓		1	2
7	7.1	$1 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$ ✓km	<p>Do not penalize the learner for not writing the unit.</p>	1	
	7.2	Day 6 ✓		1	
	7.3	<p>Sabelo: 1; 2; 4; 8; 16; 32; 64 Ayanda: 12; 17; 22; 27; 32; 37; 42</p> <p>$16 \times 2 = 32$ Day 5 ✓</p>	<p>Day 5: 1 mark</p>	1	3
8		<p>Cube or Rectangular prism ✓ Cylinder ✓ Hexagon ✓</p>			3

9			<p>1 horizontal and 1 vertical bisecting lines drawn approximately correctly : 1 mark</p> <p>No marks if the learner draws more or fewer than 2 lines, or if the lines are clearly not drawn in the correct places.</p> <p>Do not penalize the learner for not using a ruler.</p>			1
10	10.1	Reflex ✓		1	3	
	10.2	Acute ✓		1		
	10.3	Obtuse ✓		1		
11	11.1	6 hours ✓	Do not penalize the learner for not writing the unit.	1	2	
	11.2	9:14 ✓		1		
12		3:20 ✓ p.m. ✓	<p>3:20: 1 mark p.m. : 1 mark</p> <p>If the learner writes the time correctly in 24 hour time (15:20), award only 1 mark, even if p.m. is indicated.</p> <p>E.g. 15:20 or 15:20 p.m. : 1 mark only</p>			2
13		<p>19:15 + 2 hours 25 minutes = 21:40 ✓ ✓</p>	<p>9: 1 mark 40: 1 mark</p> <p>Accept the correct answer in any form.</p> <p>Do not penalize the learner for writing a.m. or p.m.</p>			2

14	14.1	3 068 ml ✓		1	3
	14.2	12 500 l ✓		1	
	14.3	40 years ✓		1	
15		3 800 ml ✓ – 500 ml = 3 300 ml ✓ OR 3,8 l – 0,5 l ✓ = 3,3 l ✓	Correct answer: 2 marks Convert 3,8 l to 3 800 ml or convert 500 ml to 0,5 l : 1 mark 3 300 ml or 3,3 l : 1 mark Do not penalize for not including unit, or for wrong unit. Apply CA.		2
16		<div style="text-align: center;"> <p><u>Cold Drink sales over the weekend</u></p>  <p style="text-align: center;">✓✓</p> </div>	Learner draws a bar graph and not a histogram or any other type of graph: 1 mark The data is correctly represented with both bars drawn correctly (Saturday should be on 30 and Sunday approximately half way between 40 and 50): 1 mark		2

17	17.1	Bathing ✓		1	
	17.2	$30 - 5 = 25 \text{ l}$ ✓	Do not penalize the learner for not including the unit or writing the incorrect unit.	1	2
18		<p>8 cm in 10 minutes $= 4 \text{ cm}$ in 5 minutes ✓</p> <p>$4 \text{ cm} \times 5 = 20 \text{ cm}$ in 25 minutes. ✓</p> <p>Or</p> <p>8 cm in 10 minutes $\times 2$ $= 16 \text{ cm}$ in 20 minutes $16 \text{ cm} + 4 \text{ cm} = 20 \text{ cm}$ in 25 minutes.</p> <p>Or</p> <p>$8 \text{ cm} \div 10 = 8 \text{ mm}$ or $0,8 \text{ cm}$ in 1 minute</p> <p>$8 \text{ mm} \times 25 = 200 \text{ mm}$</p> <p>Or</p> <p>$0,8 \times 25 = 20 \text{ cm}$</p>	<p>Correct answer: 2 marks</p> <p>Calculating distance for 5 minutes or 1 minute: 1 mark</p> <p>20 cm or 200 mm : 1 mark</p> <p>Apply CA.</p>		2
19		<p>$\frac{2}{3}$ of R483 ✓ $= R161 \times 2$ $= R322$ ✓</p> <p>Or</p> <p>$\frac{1}{3}$ of R483 ✓ $= R161$ $R483 - R161$ $= R322$ ✓</p>	<p>Correct answer: 1 mark</p> <p>Calculating $\frac{1}{3}$ or $\frac{2}{3}$ of R483: 1 mark</p> <p>R322 : 1 mark</p> <p>Apply CA.</p>		2
20		10 ✓✓	10: 2 marks 9 or 11: 1 mark		2
TOTAL:					75