



Province of the  
**EASTERN CAPE**  
EDUCATION

**SENIOR PHASE**

**GRADE 7**

**NOVEMBER 2017**

**MATHEMATICS  
MARKING GUIDELINE**

**MARKS: 100**

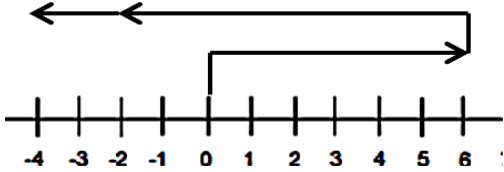
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This marking guideline consists of 7 pages.

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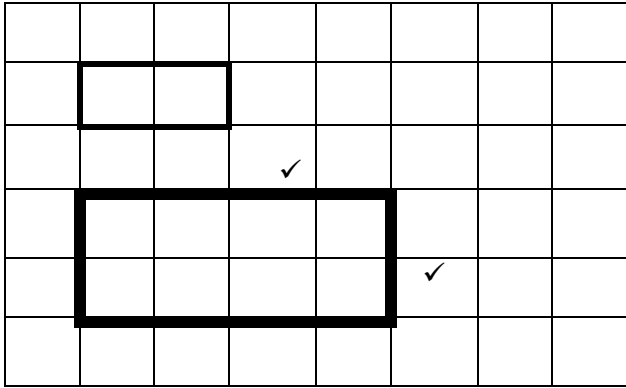
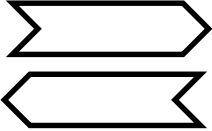
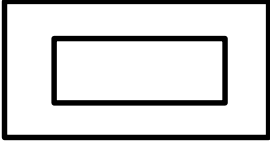
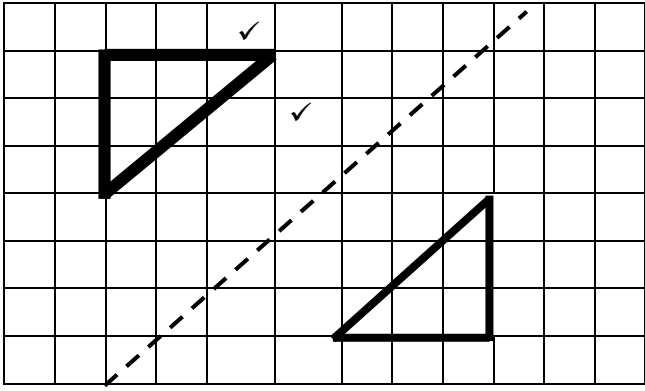
**GENERAL MARKING NOTES**

1. Give full marks for answers only, unless stated otherwise.
2. Accept any alternative correct solutions that are not included in the marking guidelines.
3. CA refers to consistent accuracy.

Questions		Expected answers	Clarification	Marks
1.	1.1	A / 9 348 000 ✓		1
	1.2	B / six tenth ✓		1
	1.3	D / 20 ✓		1
	1.4	B / ✓		1
	1.5	C / 12 ✓		1
	1.6	B / 1; 2; 4; 5; 10; 20 ✓		1
	1.7	A / 8 ✓		1
	1.8	C / 12 ✓		1
	1.9	C / Equilateral triangle ✓		1
	1.10	B / -2 ✓		1
2.	17 ✓			1
3.	3.1	-4 ✓ 	Learner must show the diagrams on the number line.	1
	3.2	8 or +8 ✓		1
4.	4.1	$x = 9$ ✓		1
	4.2	$x = 50$ ✓		1
5.	5.1	$\frac{4}{5} \times 3\frac{1}{3}$ $= \frac{4}{5} \times \frac{10}{3}$ $= \frac{40}{15}$ ✓ $= 2\frac{10}{15}$ ✓ $= 2\frac{2}{3}$	Accept any correct method. Apply CA	2
	5.2	$\begin{array}{r} 324,348 \\ + 17,879 \\ \hline 342,227 \end{array}$ ✓ $\begin{array}{r} 342,227 \\ - 6,507 \\ \hline 335,720 \end{array}$ ✓	Accept any correct method. Apply CA	2
	5.3	$\frac{0,048}{8}$ $= 0,006$ ✓✓	Accept any correct method. Apply CA	2

5.4	$\sqrt{144} - 2^4 - 4 + \sqrt[3]{27}$ $= 12 - 16 - 4 + 3$ $= -4 - 4 + 3 \checkmark$ $= -8 + 3 \checkmark$ $= -5 \checkmark$	Accept any correct method. Apply CA	3																		
5.5	Discount = R600 – R324 = R276 $\% \text{ discount} = \frac{276}{600} \times \frac{100}{1}$ $= \frac{276}{6} \checkmark$ $= 46\% \checkmark$	Accept any correct method. Apply CA	2																		
5.6	$\frac{5}{8} \times \frac{32}{1} = 20 \text{ boys } \checkmark$ $\frac{3}{8} \times \frac{32}{1} \checkmark = 12 \text{ girls } \checkmark$	Accept any correct method. Apply CA	3																		
5.7	Year 1: 5% of R1 500 $\frac{5}{100} \times \frac{1\,500}{1} = R75 \checkmark \times 2 \text{ years} = R150 \checkmark$ $R\ 1\ 500 + R150 = R\ 1\ 650 \checkmark$	Accept any correct method. Apply CA	3																		
5.8	$12 \div 2 = 6 \checkmark \div 2 = 3 \text{ years old } \checkmark$		2																		
6.	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>NUMBER OF BLACK TILES</th> <th>NUMBER OF WHITE TILES</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5</td> </tr> <tr> <td>2</td> <td>7</td> </tr> <tr> <td>3</td> <td>9</td> </tr> <tr> <td>4</td> <td>(6.1) 11 <math>\checkmark</math></td> </tr> <tr> <td>5</td> <td>13</td> </tr> <tr style="background-color: #cccccc;"> <td></td> <td></td> </tr> <tr> <td>(6.2) 50 <math>\checkmark</math></td> <td>103</td> </tr> <tr> <td>n</td> <td>(6.3) 2n + 3 <math>\checkmark</math></td> </tr> </tbody> </table>	NUMBER OF BLACK TILES	NUMBER OF WHITE TILES	1	5	2	7	3	9	4	(6.1) 11 $\checkmark$	5	13			(6.2) 50 $\checkmark$	103	n	(6.3) 2n + 3 $\checkmark$		3
NUMBER OF BLACK TILES	NUMBER OF WHITE TILES																				
1	5																				
2	7																				
3	9																				
4	(6.1) 11 $\checkmark$																				
5	13																				
(6.2) 50 $\checkmark$	103																				
n	(6.3) 2n + 3 $\checkmark$																				
6.4	Two multiplied by the number of black tiles plus three is equal to the number of white tiles. $\checkmark\checkmark$	Apply CA	2																		

7.				2
8.	8.1	The $x$ - value times two is equal to the $y$ - value. ✓✓	Accept any correct method. Apply CA	2
	8.2	$x \times 2 = y$ ✓✓	Accept any correct method. Apply CA	2
9.	9.1	27✓		1
	9.2	24✓		1
10.		$1 \times 1 = 16$ $2 \times 2 = 9$ $3 \times 3 = 4$ $4 \times 4 = 1$ $16 + 9 + 4 + 1 = 30$ ✓✓	17 and more 1 mark. 30 full marks	2
11.	11.1	9 hours ✓		1
	11.2	25 mm ✓		1
	11.3	Linear ✓		1
	11.4	50 mm. ✓ It's a linear relationship and ✓ it has a constant increase of 5 mm.		2
12.		$x \times 8 = R920$ ✓ $= R920 \div 8$ $x = R115$ ✓	Accept any correct method. Apply CA	2
13.		$Angle B = 90^\circ$ ; $Angle A = 45^\circ$ ; $Angle C = 45^\circ$ ✓ $Angles A$ and $B$ are complementary angles ✓		2
14.	14.1	B ✓		1
	14.2	C ✓		1
	14.3	D ✓		1
	14.4	A ✓		1
	14.5	Cylinder ✓		1

15.				2
16.	 			2
17.				2
18.	18.1	$\overline{GB} \perp \overline{AC} \checkmark$		1
	18.2	$\overline{AC} \parallel \overline{DF} \checkmark$		1
	18.3	$90^\circ \checkmark$		1
	18.4	Right angle / $\checkmark$		1
	18.5	$A\hat{E}D = 30^\circ \checkmark$ Because $B\hat{E}A + A\hat{E}D = 90^\circ \checkmark$ Complementary Angles = $90^\circ \checkmark$	Accept any correct method. Apply CA	3
19.	$a = 80^\circ \checkmark$ Both are acute angles of $80^\circ$ and it is the same shape that translates. $\checkmark$			2

20.		$P = 35 \text{ mm} + 10 \text{ mm} + 25 \text{ mm} + 20 \text{ mm} + 25 \text{ mm} + 10 \text{ mm} + 35 \text{ mm} + 40 \text{ mm} = 200 \text{ mm} \checkmark\checkmark$	Accept any correct method. Apply CA	2
21.	21.1	Total surface area – sum of the areas of the six rectangles: $A = [(5 \times 2) + (5 \times 2) + (5 \times 4) + (5 \times 4) + (4 \times 2) + (4 \times 2)] \text{ m}^2 \checkmark$ $= 10 \text{ m}^2 + 10 \text{ m}^2 + 20 \text{ m}^2 + 20 \text{ m}^2 + 8 \text{ m}^2 + 8 \text{ m}^2 \checkmark$ $= 76 \text{ m}^2 \checkmark\checkmark$	Accept any correct method. Apply CA	4
	21.2	Number of litres of paint needed: $126 \text{ m}^2 \div 6 \text{ m}^2/\ell \checkmark = 21 \ell \checkmark$		2
22.		$\text{Volume} = l \times b \times h \checkmark$ $= 30 \text{ mm} \times 30 \text{ mm} \times 30 \text{ mm} \checkmark$ $= 27\,000 \text{ mm}^3 \checkmark$ $= 27 \text{ cm}^3 \checkmark$	Accept any correct method. Apply CA	4
23.	23.1	20 learners $\checkmark$		1
	23.2	$38 - 10 = 28 \checkmark$		1
	23.3	75% $\checkmark\checkmark$		2
	23.4	24,7 $\checkmark\checkmark$		2
24.		$\frac{1}{6} \checkmark$		1
25.	25.1	R30 $\checkmark$		1
	25.2	37,5% $\checkmark$		1
	25.3	3 : 5 $\checkmark$		1
<b>TOTAL:</b>				<b>100</b>