

MATHEMATICS

2019 TERM 2 EXAM

Form 1

MARKING SCHEME

MATHEMATICS

SECTION I (30 MARKS)

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NO	WORKING	MARKS	REMARKS																				
1.	(a) 10 010 (b) 102 365 478 001	B1 B1																					
		2																					
2.	(a) 7 532 (b) Total value = 5×100 = 500	B1 A1																					
		2																					
3.	7056 $\begin{array}{r} 2 \overline{) 7056} \\ 2 \quad 3528 \\ 2 \quad 1764 \\ 2 \quad 882 \\ 3 \quad 441 \\ 3 \quad 147 \\ 7 \quad 49 \\ 7 \quad 7 \\ 1 \end{array}$ $7056 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 7 \times 7$ $= 2^4 \times 3^2 \times 7^2$	M1 (Table) M1 A1																					
		3																					
4.	<table border="1" data-bbox="284 1241 836 1530"> <tr><td>3</td><td>9</td><td>15</td><td>21</td></tr> <tr><td>3</td><td>3</td><td>5</td><td>7</td></tr> <tr><td>5</td><td>1</td><td>5</td><td>7</td></tr> <tr><td>7</td><td>1</td><td>1</td><td>7</td></tr> <tr><td></td><td>1</td><td>1</td><td>1</td></tr> </table> $7 \times 5 \times 3 \times 3 = 315 \text{ minutes} = \frac{315}{60} = 5 \text{ hrs } 15 \text{ minutes}$ 11.00 pm – 5 hrs 15 minutes 10.45 p.m	3	9	15	21	3	3	5	7	5	1	5	7	7	1	1	7		1	1	1	M1 M1 A1	
3	9	15	21																				
3	3	5	7																				
5	1	5	7																				
7	1	1	7																				
	1	1	1																				
		3																					

5.	$ \begin{array}{r rrrr} 2 & 108 & 168 & 180 \\ \hline 2 & 54 & 84 & 90 \\ 3 & 27 & 42 & 45 \\ & 9 & 14 & 15 \end{array} $ Largest container = $2 \times 2 \times 3$ = 12 litres	M1 M1 A1	
		3	
6.	$ \begin{array}{r} \underline{1\ 478\ 019} \\ (1+7+0+9) - (4+8+1) \\ 17 - 13 = 4 \\ \text{Therefore } 1\ 478\ 019 \text{ is } \underline{\text{not divisible}} \text{ by } 11 \end{array} $	M1 A1	
		2	
7.	NUMERATOR $-4 + 84 + 10 = 90$ DENOMINATOR $6 \times 3 = 18$ QUOTIENT $\frac{90}{18} = 5$	M1 M1 A1	
		3	
8.	$ \begin{array}{l} \frac{1}{3} \text{ of } \frac{7}{12} \div \frac{1}{12} \\ \frac{1}{3} \times \frac{7}{12} = \frac{7}{36} \\ \frac{7}{36} \div \frac{1}{12} = \frac{7}{36} \times \frac{12}{1} = \frac{7}{3} \\ 2\frac{1}{3} \end{array} $	M1 A1	The final answer must be a mixed number.

		2	
9.	Let $x = 0.2\dot{3}$ $10x = 2.333333...$ $100x = 23.333333...$ $100x - 10x = 23.333333... - 2.333333...$ $90x = 21$ $x = \frac{21}{90} = \frac{7}{30}$	M1 M1 A1	
		3	
10.	$\sqrt{0.792} = \sqrt{79.2 \times 10^{-2}}$ $= 8.899 \times \frac{1}{10}$ $= 0.8899$	M1 M1 A1	
		3	
11.	$\sqrt{\frac{0.0625 \times 2.56 \times 10^6}{0.25 \times 0.08 \times 0.5 \times 10^6}}$ $= \sqrt{\frac{625 \times 256}{25 \times 8 \times 50}}$ $= \sqrt{16}$ $= 4$	M1 M1 M1 A1	
		4	

SECTION II (20 marks)

NO	WORKING	MARKS	REMARKS
12.	(a) School fees = $\frac{1}{4}$ Remainder = $\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$ Electricity and water = $\frac{1}{4}$ of $\frac{3}{4} = \frac{1}{4} \times \frac{3}{4} = \frac{3}{16}$ Fees + electricity and water = $\frac{1}{4} + \frac{3}{16} = \frac{7}{16}$ Remainder = $\frac{16}{16} - \frac{7}{16} = \frac{9}{16}$ Transport = $\frac{1}{9}$ of $\frac{9}{16} = \frac{1}{9} \times \frac{9}{16} = \frac{1}{16}$ Fees + electricity and water + transport $= \frac{1}{4} + \frac{3}{16} + \frac{1}{16} = \frac{8}{16} = \frac{1}{2}$ Remaining = $\frac{1}{2} = 8400$ Total January salary = $\frac{2}{1} \times 8400 = \text{shs. } 16\ 800$ (b) School fees $= \frac{1}{4} \times 16800$ $= \text{shs. } 4200$ (c) Transport $= \frac{1}{16} \times 16800$ $= \text{shs. } 1050$ (d) Water and electricity $= \frac{3}{16} \times 16800$ $= \text{shs. } 3150$	M1 M1 M1 A1 M1 A1 M1 A1 M1 A1	

		10	
13.	(a) Number of cartons $= \frac{30\,816}{24}$ =1284 cartons (b) Total mass of the empty cartons $1284 \text{ cartons} \times 2\text{kg}$ 2568kg (c) Total mass of books in one carton $\text{mass of books in one carton} = 12\text{kg} - 2\text{kg}$ $= 10\text{kg per carton}$ (d) Total mass of all the exercise books $\text{Total mass of all the exercise books} = 1284 \times 10\text{kg}$ $= 12\,840 \text{ kg}$ (e) Mass of one exercise book $\text{mass of one book} = 10\text{kg} \div 24$ $= 0.42\text{kg}$	M1 A1 M1 A1 M1 A1 M1 A1	
		10	