EXAMINATIONS COUNCIL OF SWAZILAND

CONFIDENTIAL
November 2018

JUNIOR CERTIFICATE EXAMINATION

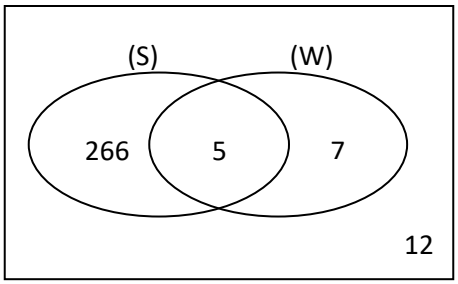
MATHEMATICS PAPER 2

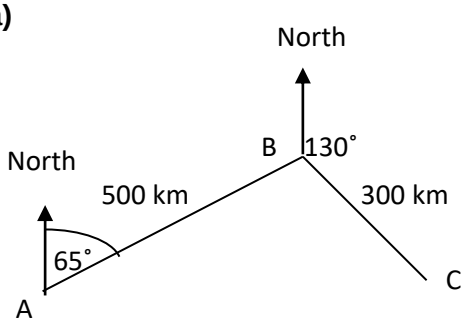
MARK SCHEME

MAXIMUM MARK 100

Q	Answers	Mark	Total
1	**(a)** (i) $\frac{12x+5x+15}{30}$ oe	2	
	$\frac{17x+15}{30}$	1	
	(ii) $3t^2-5t^3-10t^2+20t$	2	
	$20t-5t^3-7t^2$	1	
	(b) (i) $10x-3x=14$ oe	1	
	$7x=14$	1	
	$(x)=2$	1	
	(ii) $2t<14$	1	
	$t<7$	1	
			11
2	**(a)** $40\times50+20\times30$	2	
	(E) 2600. 00	1	
	(b) $their\,(a)-4\times500$	1	
	(E) 600.00	1	
	(c) $\frac{their\,(b)}{2000}\times100\%$	1	
	30 %	1	**7**

3	**(a)** $9 - 8 - 1$ 0 **(b)** $2.3\times10^4 + 0.018\times10^4$ oe 2.318×10^4 **(c)** $(8\div4)\times(10^7\div10^{-5})$ $2\times10^{7--5}$ 2×10^{12}	1 1 2 1 1 1 1	**8**
4	**(a)** 3 **(b)** $\frac{0.5\times20\times75}{15}$ 50 **(c)** (i) $7(2a-7)$ (ii) $5x^2y(3x-4y)$	1 1 1 1 2	**6**

5	**(a)** 	1 1 1 1	
	(b) 26 + 5 + 7 + 12	1	
	50	1	**6**
6	**(a)** (i) $15\times10\times4$	1	
	600 (cm^3)	1	
	(ii) $2(10\times15)+2(10\times4)+2(15\times4)$	3	
	500 (cm^2)	1	
	(b) (i) $628 = 3.14(10)^2 h$	1	
	$628 = 314h$	1	
	$(h) = 2$	1	
	(ii) 0.75×628	1	
	471 (g)	1	**11**

7	**(a)** 	2	
	(b) correct lengths [10 $\pm$ 0.1mm and 6 $\pm$ 0.1mm]	2	
	Correct angles $(\pm 1^o)$	2	
	(c) 675 to 685 (km)	2	
	(d) 360˚ - 91˚	1	
	269˚ $(\pm 1^o)$	1	**10**
8.	**(a)** y = -1	1	
	(b) (i) $\frac{1-0}{0--2}$ oe	1	
	$\frac{1}{2}$	1	
	(ii) $y = \frac{1}{2}x + 1$	2	
	(c) $y \geq -1$	1	
	$y \leq \frac{1}{2}x + 1$	2	**8**

<table>
<tr><td>9</td><td>(a) $y+7+3$

$y+10$

(b) $(y+7+5)+(y+5)$

$2y+17$</td><td>1

1

2

1</td><td>5</td></tr>
<tr><td>10</td><td>(a) reflection, $x=-1$

(b) translation , $\begin{pmatrix}-6\\-4\end{pmatrix}$

(c) rotation, - 90˚, (0,0)

(d) enlargement, (0, 2) , scale factor = 2

(e) enlargement, (0, 2) , scale factor = 0.5</td><td>2

2

3

3

3</td><td>13</td></tr>
<tr><td>11</td><td>(a)
<table><tr><th>Marks</th><th>Frequency</th></tr><tr><td>3</td><td>1</td></tr><tr><td>4</td><td>2</td></tr><tr><td>5</td><td>5</td></tr><tr><td>6</td><td>1</td></tr><tr><td>7</td><td>5</td></tr><tr><td>8</td><td>3</td></tr><tr><td>9</td><td>2</td></tr><tr><td>10</td><td>1</td></tr></table></td><td>4</td><td></td></tr>
</table>

	(b) (i) 5 marks and 7 marks	2	
	(ii) Median = 7 marks	2	
	(iii) $\frac{129}{20}$	2	
	6.45	1	
	(c) (i) $\frac{3}{20}$ oe	1	
	(ii) 0	1	
	(iii) $\frac{8}{20}$ oe	2	**15**

Permission to reproduce items where third party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (ECOS) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.