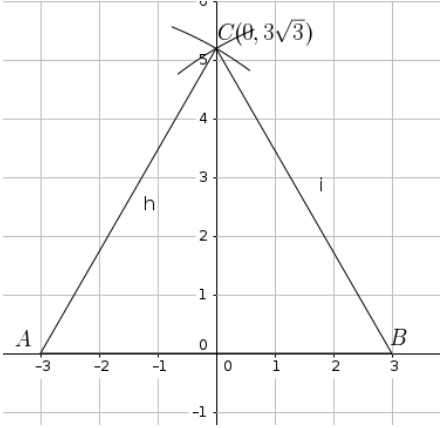
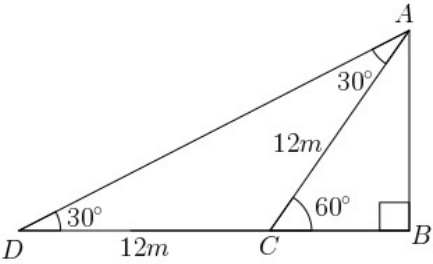


SSLC EXAMINATION MARCH 2020
MATHEMATICS – ANSWER KEY

Qn no.	Key	Score
1	a) 121 b) 3	2
2	a) 6 b) 8	2
3	$(x+2)(x-2)$	2
4	a) 5 b) $x^2+y^2=9$	2
5	a) First term = 8 Common difference = 3 b) $5n+3$	3
6	a) $10\sqrt{2}cm$ b) $5\sqrt{2}cm$ c) $5\sqrt{2}cm$	3
7	Construction	3
8	a) 1 b) $x+1$ c) $(x-1)(x+1)+1=x^2-1+1=x^2$	3
9	$C(9,2), B(6,-1), D(6,5)$	3
10	a) 180° b) $\angle A=70^\circ$	3

	$\angle C = 110^\circ$	
11	a) 10 cm b) 13 cm c) 260 cm^2	3
12	a) 25 b) n^2 c) n d) 2020	4
13	Construction	4
14	a) 50 b) $\frac{30}{50}$ c) 30 d) $\frac{20 \times 30}{50 \times 50}$	4
15	a) 18 cm b) $(9+x)^2 + (9-x)^2 = 164$ $x = 1$ $AB = 10 \text{ cm}$	4
16	a) 4 cm b) $4\sqrt{3} \text{ cm}$ c) Draw triangle PQR with $PR = 4 \text{ cm}$, $QR = 4 \text{ cm}$, and $\angle R = 120^\circ$	4
17	a) 1 b) $(x^2 - 3^2) - 7(x - 3)$	4

	$(x-3)(x-4)$ c) 3, 4	
18	a) 5 cm b) $AP = AQ$ $AP = BP, AQ = CQ$ c) 5 cm	4
19		4
20	a) 12 cm b) 4 cm c) $r = 4\text{ cm}, h = 8\sqrt{2}\text{ cm}$ d) 120°	4
21	a) -1 b) $5 - y = 5$ 0 c) (5, 0)	4
22	a) 8 b) 80 c) $\text{Common difference} = \frac{8-16}{5-3} = -4$ $x_1 = 8 - 4 \times (-4) = 24$	5

	24,20,16,.....													
23	 <p>In triangle ACD $\angle D=30^\circ, \angle CAD=30^\circ$</p> <p>$AC=12m$</p> <p>$\sin 60^\circ = \frac{AB}{12}$</p> <p>$AB=6\sqrt{3}m$</p>	5												
24	Construction	5												
25	<p>a) 3</p> <p>b) $(x-5)^2+(y-3)^2=9$</p> <p>c) 3</p> <p>d) 5</p>	5												
26	<p>a) $144\pi cm^2$</p> <p>$288\pi cm^3$</p> <p>b) $72\pi+36\pi=108\pi cm^2$</p> <p>$144\pi cm^3$</p>	5												
27	<table border="1" data-bbox="316 1581 1235 1928"> <thead> <tr> <th>Mark</th> <th>Number of children</th> </tr> </thead> <tbody> <tr> <td>Below 10</td> <td>4</td> </tr> <tr> <td>Below 20</td> <td>11</td> </tr> <tr> <td>Below 30</td> <td>21</td> </tr> <tr> <td>Below 40</td> <td>33</td> </tr> <tr> <td>Below 50</td> <td>41</td> </tr> </tbody> </table> <p>Median = mark of 21st child</p>	Mark	Number of children	Below 10	4	Below 20	11	Below 30	21	Below 40	33	Below 50	41	5
Mark	Number of children													
Below 10	4													
Below 20	11													
Below 30	21													
Below 40	33													
Below 50	41													

	$d = \frac{10}{10} = 1$ <p>a) 20.5</p> <p>b) <i>Median</i> = $20.5 + 9 \times 1 = 29.5$</p>	
28	<p>a) 25°</p> <p>b) 50°</p> <p>c) $\angle APC = 25^\circ$</p> <p>115°</p> <p>d) 90°</p>	5
29	<p>a) -1</p> <p>b) 1</p> <p>c) 22</p> <p>d) -22</p> <p>e) 0</p> <p>f) $2n+1$</p>	6