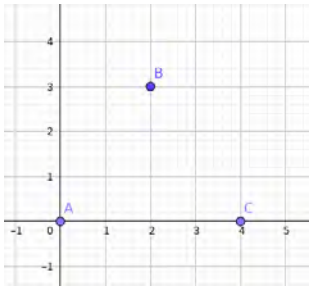
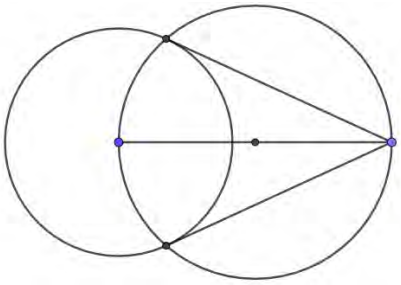
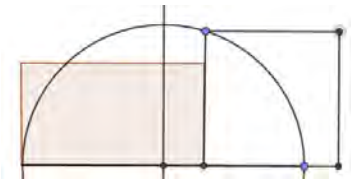
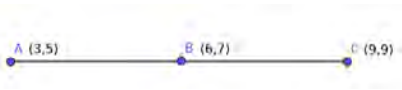
SSLC EXAMINATION MARCH-2024

MATHEMATICS

QN: No	ANSWER	mark	QN: No	ANSWER	mark
1	P – inside the circle Q – outside the circle	2	9	(a) d=4 (b) X_1= 4+1 = 5 (c) 1	3
2	12.0,12.5,12.6,12.9,13.4,13.7,14.1 median = 12.9	2			
3	(a) 4,8,12,.... (b) d=4	2	10	(a) <QOR = 150 (b) <A=80 <B=70 <C=30	3
4	$\frac{10}{25}=\frac{2}{5}$	2			
5	 Perpendicular distance = 3	3	11	(a) $\frac{12}{50}$ (b) $\frac{8}{50}$ (c) $\frac{4}{50}$	4
6	(a) x+10 (b) x(x+10) = 144 x^2+10x = 144 x^2+10x+5^2 = 144+25 $(x+5)^2$ = 169 x+5 = 13 x = 13-5 x = 8 age of renuka = 8 age of ajay= 18	3	12	(a) 2 (b) . 	4
7		3	13	(a) NO, 25 is not a term (b) 144 Is not a term (c) the rmainder are 2 when each terms are divided by d=6 but	4

8	 $m_{AB} = \frac{7-5}{6-3} = \frac{2}{3}$ $m_{BC} = \frac{9-7}{9-6} = \frac{2}{3}$ $M_{AB} = M_{BC}$ Hence the proof	3		$\frac{(6n)^2}{6}$ *remainder is* 0 $\frac{(6n\pm1)^2}{6}$ *remainder is* 1 $\frac{(6n\pm2)^2}{6}$ *remainder is* 4 $\frac{(6n\pm3)^2}{6}$ *remainder is* 3 continuese like this the remainder cannot be 2. hence the proof	
14	(a) P= (5,4) Q=(6,6) (b) $\sqrt{(6-5)^2+(6-4)^2}$ $\sqrt{1^2+2^2} = \sqrt{5}$	4	23	<table><tr><td>Age</td><td>No of</td></tr><tr><td>30</td><td>9</td></tr><tr><td>40</td><td>19</td></tr><tr><td>50</td><td>27</td></tr><tr><td>60</td><td>32</td></tr><tr><td>70</td><td>33</td></tr></table>(a) $\frac{33+1}{2} = 17$ (b) $d = \frac{40-30}{19-9} = \frac{10}{10} = 1$ median=X_{17}= 37.5	5
15	(a) 15 (b) $\frac{120}{360} = \frac{r}{15}$ $r = 5$ (c) $CSA = \pi\ rl$ = 5 x 15 x π = 75π	4			
16	$\sin 49 = \frac{l}{9}$ $l = 0.75 * 9 = 6.75$ $\cos 49 = \frac{b}{9}$ $b = 0.66 * 9 = 5.94$	4	24	(a) . (b)  $\tan 65 = \frac{X}{100}$ $X\ 2.14 \times 100 = 214$	5
17	(a) (-4,0) (b) BG= $2\sqrt{3}$ (c) B= (2, $2\sqrt{3}$) E=(-2,- $2\sqrt{3}$)	4	25	(a) $\frac{61-26}{8-3} = \frac{35}{5} = 7$ (b) $X_1 = 26-2\times7 = 12$ (c) $X_n = 7n+5$ (d) $S_{15} = 61\times15 = 915$	5
18	$X^2 = X+12$ $X^2 - X - 12 = 0$ $(X+3)(X-4) = 0$ ie X=4 and X= -3	4	26	(a) $2al = 2\times20\times26 = 1040$ (b) h= $\sqrt{26^2-10^2} = \sqrt{576} = 24$ (c) $v = \frac{1}{3}\times20^2\times24\,cm^2 = 3200\,cm^2$ $v = 3.2l$	5
19	(a) $(X-2)(X-3)$ (b) $X=2$ $x=3$	4	27	(a) 55 (b) 90 (c) 125 (d) 55	5
20	(a) 5:3 (b) 25:9	4			

	(c) $\frac{25}{9}=\frac{100}{S}$ $S=\frac{100*9}{25}=36$				
21	$< A=\frac{80}{2}=40$ $< D=\frac{110}{2}=55$ $< P=85$	4	28	(a) Yes, (3.4) is in the same line (b) coordinate on x axis is (1,0) coordinate on y axis is(0,-2)	5
22	 $r=1.5$	5	29	(a) 6, 12 (b) 2,4,8,16,..... (c) 4 (d) 81	5