

S S L C Examination March 2022
Maths Answer Key

1	3,7,11,... d=4
2	$\angle A - 180 - 110 = 70^\circ$
3	$\frac{3}{10}$
4	4
5	$\frac{90}{360} = \frac{r}{12}$, r=3
6	P(1)=0
7	$\tan 30^\circ = \frac{1}{\sqrt{3}}$
8	$r = \frac{A}{S}$ $2 = \frac{A}{12}$,Area =24
9	$10\sqrt{3}$
10	y=1
11	(a) $x_{20} = 62$ (b) $x_n = 3n + 2$
12	(a) 25 (b) 1/2
13	(a) 3 (b) $3\sqrt{3}$
14	$x(x+1)$
15	32,35,38,42,43,44,45 Median 42
16	$S_n = n^2 + n$ first term = $1+1 = 2$ $S_{10} = 100+10=110$
17	$PA \cdot PB = PC^2$ $PC^2 = 9 \cdot 4 = 36$ $PC = \sqrt{36} = 6$
18	$\left\{ 1 + \frac{2}{3} (7-1), 2 + \frac{2}{3} (5-2) \right\}$

	$\{ 1+2*2, 2+2 \}$ $\{ 5, 4 \}$
19	Constructions central angles $100^\circ, 120^\circ$
20	(a) $x(x+4) = 77$ $7*11 = 77$ $x^2 + 4x = 77$ $x^2 + 4x + 2^2 = 77 + 2^2$ $(x+2)^2 = 81$ $x+2 = 9$ $x = 9 - 2 = 7$ 7, 11
21	Construction
22	$r = 9$ $h = 12$ $l = \sqrt{81 + 144} = \sqrt{225} = 15$ $TSA = \pi r l + \pi r^2$ $= \pi * 9 * 15 + \pi * 9 * 9 = 81\pi + 135\pi$ $= 216\pi \text{ cm}^2$
23	(a) C(10, 8) (b) (6, 5)
24	(a) 20 (b) $\frac{3}{10}$ (c) $\frac{4}{20}$
25	(a) $\sin 40 = \frac{h}{10}$ $0.64 = \frac{h}{10}$ $h = 6.4 \text{ cm}$ (b) Area = $bh = 6.4 * 20 = 128 \text{ sq cm}$
26	(a) PC = 4 (b) Constructions
27	$\angle ADC = 90$ AB = 10 BC = $10\sqrt{3}$ AD = $10\sqrt{2}$ DC = $10\sqrt{2}$ Perimeter = AB + BC + CD + AD = $10 + 10\sqrt{3} + 10\sqrt{2} + 10\sqrt{2}$
28	(a) B(7, 1), D(2, 5) (b) $l = 5, b = 4$ AC = $\sqrt{41}$

29	<p>(a) $V=288\pi$ c cm (b) $h= 24\text{cm}$</p>
30	<p>$X+5$ $x(x+5)$ $x^2+5x=104$</p> <p>8,13</p>
31	<p>$P(1) = 3$ $(x-1)(x-2)$ $x=2,1$</p>
32	<p>Total 45 23rd household</p> <p>160-162 . 20th 162-164 21st 164-166 22nd 166-168 23rd</p> <p>20th = 161 23rd = 167</p>
33	<p>(a) $S_{15}= 510$ (b) $x_{16}- x_1 =15d=15*4=60$ (c) 900</p>
34	<p>$\angle ACB=70$ constructions central angle 130,120</p>
35	<div data-bbox="454 1339 1193 1892" data-label="Figure"> <p>The figure shows a Cartesian coordinate system with a grid. The x-axis is labeled from -3 to 7, and the y-axis is labeled from -2 to 5. Two points are plotted and labeled: point A is at (2, 1) and point B is at (4, 3). Both points are marked with blue dots.</p> </div> <p>(b) Slope $\frac{2}{2}=1$ (c) End point of diameter (5,2)</p>
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