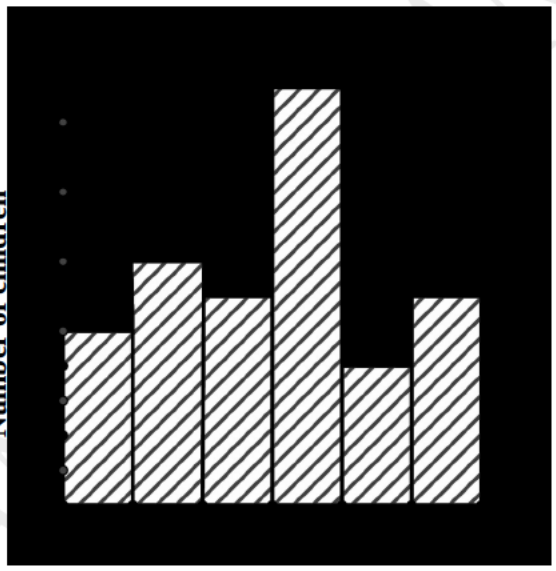
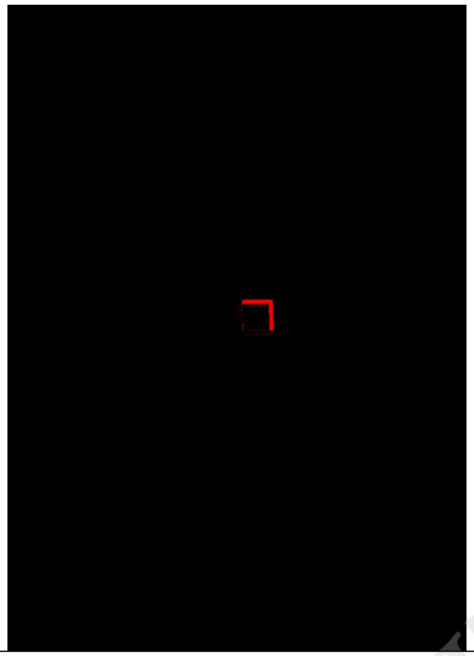
ANNUAL EXAMINATION, MARCH 2023 - 2024

A | **STD 8 - MATHEMATICS – ANSWER KEY** | **E 803**

Qn no.	Key	Score	
	Answer any 4 questions from 1 to 5		
1	a) $AB = 5\ cm$ b) $\angle A = \frac{180^0 - 60^0}{2} = 60^0$	1 1	2
2	5 times the number $= 100 + 5 = 105$ Number $= \frac{105}{5} = 21$ **OR** If we take , number $= x$ then , $5x = 100 + 5 = 105$ $x = \frac{105}{5} = 21$	1 1 1 1	2
3	a) $\angle OPQ = \frac{540^0}{5} = 108^0$ b) $\angle ONR = 180^0 - 108^0 = 72^0$	1 1	2
4	a) Equilateral triangle. b) 60^0	1 1	2
5	a) $5 + 3 = 8$ b) $10 - 10 = 0$	1 1	2
	Answer any 4 questions from 6 to 11		
6	a) $(146 + 145)(146 - 145)$ **OR** $291 \times 1 = 291$ b) $(30 + 1)(30 - 1)$ $= 30^2 - 1^2 = 899$	1 1 1	3
7	First year's interest $= 20000 \times \frac{10}{100} = 2000\ Rs$ Balance in second year $= 20000 + 2000 = 22000\ Rs$ Second year's interest $= 22000 \times \frac{10}{100} = 2200\ Rs$ Amount get back after 2 years $= 22000 + 2200 = 24200\ Rs$	1 1 1	3

	OR **Amount get back after 2 years** $= P\left(1 + \frac{r}{100}\right)^2$ $= 20000\left(1 + \frac{10}{100}\right)^2 = 20000\left(\frac{110}{100}\right)^2$ $= 20000 \times \frac{110}{100} \times \frac{110}{100} = 24200\ Rs$	1 2	
8	a) $5 + 4 = 9\ cm$ b) $\frac{1}{2} \times QS\ (AP + BR) = \frac{1}{2} \times 10 \times 9 = 45\ sq.cm$	1 2	3
9	a) $(-1)^2 = 1$ b) $y = (-1)^2 + 5$ $= 1 + 5 = 6$	1 1 1	3
10	a) 25 b) $20 - 25$ c) $11 + 5 + 1 = 17$	1 1 1	3
11	a) $4\ cm$ b) $PB = 7 - 2 = 5\ cm$ c) $5 \times 4 = 20\ sq.cm$	1 1 1	3
	Answer any 5 questions from 12 to 18		
12		4	4

13	a) $\angle A + \angle B + \angle C = 360^0 - 80^0 = 280^0$	1	4
	b) $\angle A = 280^0 \times \frac{1}{4} = 70^0$	1	
	$\angle B = 280^0 \times \frac{1}{4} = 70^0$	1	
	$\angle C = 280^0 \times \frac{2}{4} = 140^0$	1	
	OR		
	$\angle A = x^0$, $\angle B = x^0$, $\angle C = 2x^0$		
	$x + x + 2x = 280^0$ ==> $4x = 280^0$ ==> $x = \frac{280^0}{4} = 70^0$	1	
	$\angle A = x^0 = 70^0$, $\angle B = x^0 = 70^0$	1	
	$\angle C = 2x^0 = 140^0$	1	
14		4	4
15	a) 18	1	4
	b) -3	1	
	c) -9	1	
	d) 2	1	
16	a) $\frac{1}{2} \times 6 \times$ *second diagonal* $= 12$	1	
	second diagonal $= 4$ *cm*	1	

	b) 	4	4
17	a) $AE = \frac{13-7}{2} = 3\ cm$ b) $DE = \sqrt{5^2 - 3^2} = 4\ cm$ c) $\frac{1}{2}(13 + 7) \times 4 = 40\ sq.cm$	1 1 2	4
18	a) $7^2 - 5^2 = 49 - 25 = 4 \times 6$ b) $9^2 - 7^2 = \underline{\quad 4 \quad} \times 8$ c) $15^2 - \underline{\quad 13^2 \quad} = 4 \times 14$ d) $(x + 1)^2 - (x - 1)^2 = \underline{\quad 4 \times x \quad}$	1 1 1 1	4