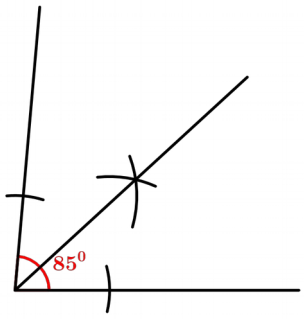
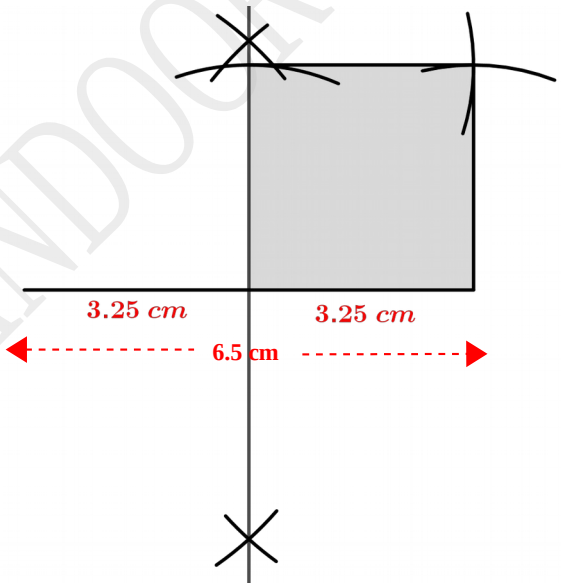
FIRST TERM EVALUATION 2023 - 2024

A **MATHEMATICS EM – ANSWER KEY** **E-803**

Qn no.	Key		Score
	Each questions from 1 to 5 carries 2 scores. (Answer any 4)		
1	a) $\angle R = 40^0$ b) $\angle P = 180^0 - (40^0 + 40^0) = 100^0$	1 1	2
2	If three consecutive natural are taken as $x-1$, x , $x+1$, $x - 1 + x + x + 1 = 15$ ==> $x = 5$ Numbers = 4 , 5 , 6	1 1	2
3	$\angle X = \angle R$, $\angle Z = \angle Q$ Or $\angle Y = \angle P$	2	2
4	$10 \times 180^0 = 1800^0$	2	2
5	a) $\angle ABC = \frac{720^0}{6} = 120^0$ b) $\angle CBG = 180^0 - 120^0 = 60^0$	1 1	2
	Each questions from 6 to 11 carries 3 scores. (Answer any 4)		
6	a) $\angle ACD$ b) $\angle CND = \angle AMB = 90^0$ $\angle DCN = \angle BAM$ $\angle CDN = \angle ABM$	1 2	3
7		1 1 1	3
8	Number of white balls = x Number of red balls = $2x$ Number of blue balls = $3x$	1 1	

	$x + 2x + 3x = 24 \quad ==> \quad 6x = 24 \quad ==> \quad x = \frac{24}{6} = 4$ **Number of white balls** $= 4$ **Number of red balls** $= 2 \times 4 = 8$ **Number of blue balls** $= 3 \times 4 = 12$	1	3
9	a) $x - 12$ b) $x + x + x - 120 = 180 \quad ==> \quad 3x - 12 = 180 \quad ==> \quad x = 64^0$ $\angle A = 64^0 \quad , \quad \angle C = 64 - 12 = 52^0$	1 1 1	3
10	a) $\angle ADC = 180 - 70 = 110^0$ b) 360^0 c) $\angle AC = 360 - (110 + 95 + 80) = 75^0$	1 1 1	3
11	a) Square . b) Equilateral triangle . c) 120^0	1 1 1	3
	Each questions from 12 to 18 carries 4 scores. (Answer any 5)		
12		1 1 1 1	4
13	a) $\angle AMB = 90^0$ b) $AM = \sqrt{10^2 - 6^2} = \sqrt{64} = 8\ cm$ c) $BC = 6 + 6 = 12\ cm$	1 2 1	4

14	**a)** 52 **b)** 90 **c)** 60 **d)** 400	1 1 1 1	4
15	**a)** **b)** $x + 2 + 5x + 2 = 40 \Rightarrow 6x + 4 = 40 \Rightarrow x = 6$ Son's present age $= 6$ **c)** Jeena's present age $= 5 \times 6 = 30$	1 1 1 1 1	4
16	**a)** 360^0 **b)** 60^0 **c)** $\angle ABC = 360 - (120 + 90 + 60) = 90^0$ **d)** $\angle PQR = 360 - (120 + 90) = 150^0$	1 1 1 1	4
17	**a)** 360^0 **b)** $\frac{360}{5} = 72^0$ **c)** $\frac{360}{18} = 20^0$ **d)** $\frac{360}{10} = 36$	1 1 1 1	4
18	**a)** $4 \times 6 = 24 = 5^2 - 1$ **b)** $9^2 - 1$ **c)** 10×12 **d)** $x + 1$	1 1 1 1	4

	Present age	After 2 years
Son's age	x	$x + 2$
Jeena's age	$5x$	$5x + 2$