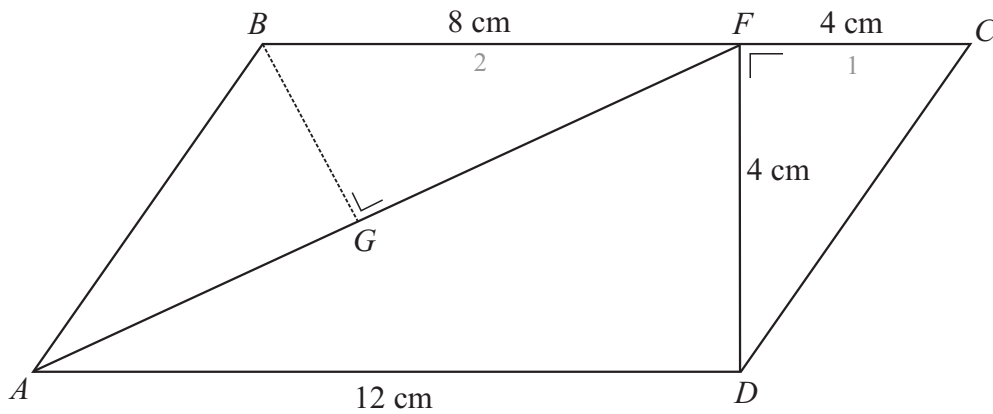


SAMPLE PAPER 1: PAPER 2

QUESTION 6 (25 MARKS)



Question 6 (a)

$$|AD| = |BC| = 12 \text{ cm}$$

$$|BF| = 2|FC|$$

$$\therefore |BF| = 8 \text{ cm}, |FC| = 4 \text{ cm}$$

Question 6 (b)

$$\text{Triangle } FCD: A = \frac{1}{2}(4)(4) = 8 \text{ cm}^2$$

$$\text{Triangle } AFD: A = \frac{1}{2}(12)(4) = 24 \text{ cm}^2$$

$$\text{Parallelogram } ABCD: A = (12)(4) = 48 \text{ cm}^2$$

$$\text{Triangle } BFA: A = 48 - 8 - 24 = 16 \text{ cm}^2$$

Question 6 (c)

$$|AF|^2 = 4^2 + 12^2 = 16 + 144 = 160 \Rightarrow |AF| = \sqrt{160} = 4\sqrt{10}$$

$$\frac{1}{2}(4\sqrt{10})|BG| = 16$$

$$\therefore |BG| = \frac{4\sqrt{10}}{5} \text{ cm}$$