

Design our 6th Class welcome poster

MODULE 9 · MATHEMATICAL MODELING AND END-OF-YEAR REVIEW

REVIEW

DESIGNING A 60 CM × 40 CM WELCOME POSTER

- 1 **Area** of the poster: $60 \times 40 = 2\,400 \text{ cm}^2$.
- 2 Border made of **squares of side 5 cm**: perimeter is $2(60 + 40) = 200 \text{ cm} \rightarrow 40 \text{ squares}$ fit around the edge.
- 3 A **central square** of side 30 cm leaves: $2\,400 - 30 \times 30 = 2\,400 - 900 = 1\,500 \text{ cm}^2$ for the border.
- 4 If the design is **symmetrical** about the vertical centre line, only **half** needs planning — the other half mirrors it.

HOW TO ANSWER TODAY

- **Perimeter.** Perimeter is the distance ALL the way round. Rectangle: $(\text{length} + \text{width}) \times 2$.
 $12 \text{ m by } 8 \text{ m} \rightarrow (12 + 8) \times 2 = 40 \text{ m}$
- **Distance on an axis.** If the two points share x or y, subtract the OTHER coordinates. Answer is in units.
 $(2, 5) \text{ and } (2, 9) \text{ share } x=2 \rightarrow 9 - 5 = 4 \text{ units}$
- **Area.** Area = length $\times$ width. Write the answer in square units (cm^2 , m^2).
 $5 \text{ m} \times 3 \text{ m} \rightarrow 15 \text{ m}^2$

WARM-UP

Plan the layout of your A3 welcome poster. List each element, work out its area, and check that the total comes to 100% of the page.

	Shape / size	Area (cm^2)	% of poster
a. Title block			
b. Symmetry pattern			
c. Bar chart			
d. Photo / illustration			
e. Whitespace			
f. TOTAL			