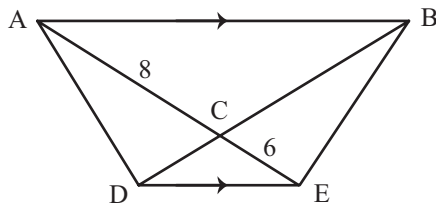


# Contents

Unit	Title	Page No.
1	Congruence and Similarity	1
2	Direct and Inverse Proportion	8
3	Expansion and Factorisation of Algebraic Expressions	13
4	Algebraic Manipulation and Formulae	19
5	Simultaneous Linear Equations	27
6	Inequality	33
7	Pythagoras' Theorem	36
8	Trigonometric Ratios	42
9	Volume and Surface Area	48
10	Graphs of Linear Equations in Two Unknowns	60
11	Graphs of Quadratic Functions/Equations	71
12	Statistics	81
13	Probability	92
	Revision Test I	97
	Revision Test II	115
	Revision Test III	130
	Answers	145

## Practice Questions

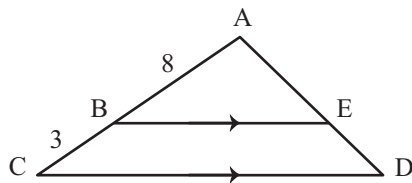
1. In the figure below, not drawn to scale, ABED is a quadrilateral where AB is parallel to DE. AE and BD meet at C where EC = 6 cm and CA = 8 cm.



- (a) Identify a pair of similar triangles and show that they are similar.
- (b) Express the ratio of AB : ED in its simplest form.

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2. In the figure below, not drawn to scale AB = 8 cm, BC = 3 cm and BE is parallel to CD.



- (a) Prove that  $\triangle ABE$  is similar to  $\triangle ACD$ , stating your reasons clearly.
- (b) Find the value of  $\frac{BE}{CD}$ .

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22. A map of a park is drawn to a scale of 1 : 25 000.
- (a) Calculate the actual distance, in km, represented by 30 cm on the map.
  - (b) On the map, a pond has an area of 24 cm<sup>2</sup>. Calculate, in km<sup>2</sup>, the actual area of the pond.
- .....

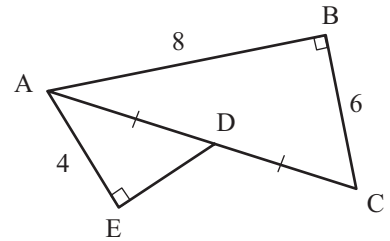
23. On a map, an area of 200 cm<sup>2</sup> represents an actual area of 8 km<sup>2</sup>.
- (a) If the map has a scale of 1 :  $n$ , find the value of  $n$ .
  - (b) If the distance between two points on the map is 3 cm, find the actual distance, in km, between the two points.
- .....

24. The distance between Town X and Town Y is 2.5 km. It is represented by 4 cm on the map.
- (a) Express the scale in the form 1 :  $n$ .
  - (b) Find the area of a lake, in km<sup>2</sup>, that is represented by 32 cm<sup>2</sup> on the map.
- .....

25. In a particular map, 1 cm represents 550 m.
- (a) Given that the scale of this map is 1 :  $5x$ , find the value of  $x$ .
  - (b) If the actual length of a road is 11 km, find its length represented on the map.
- .....

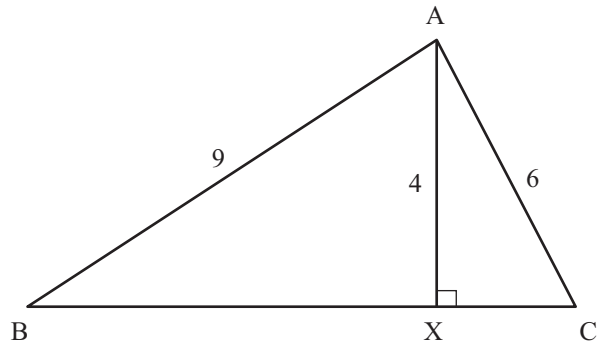
12. Given that  $AB = 8$  cm,  $BC = 6$  cm,  $AE = 4$  cm,  $DE = x$  cm and  $AD = DC$ . Find the value of

- (a)  $AD$ ,
- (b)  $ED$ .



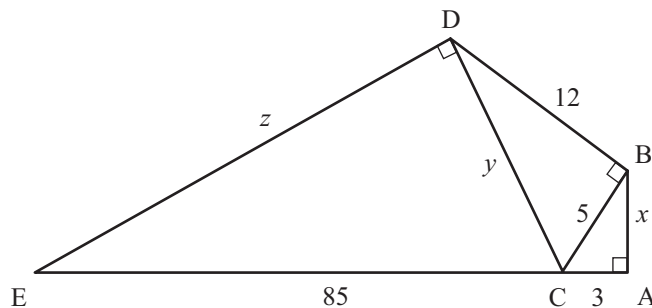
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13. In the figure below,  $AB = 9$  cm,  $AC = 6$  cm,  $AX = 4$  cm and  $\angle AXC = 90^\circ$ . Calculate the length of  $BC$ , giving your answer correct to 3 significant figures.



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14. In the figure below,  $AC = 3$  cm,  $BC = 5$  cm,  $BD = 12$  cm and  $CE = 85$  cm. Find the values of  $x$ ,  $y$  and  $z$ .



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