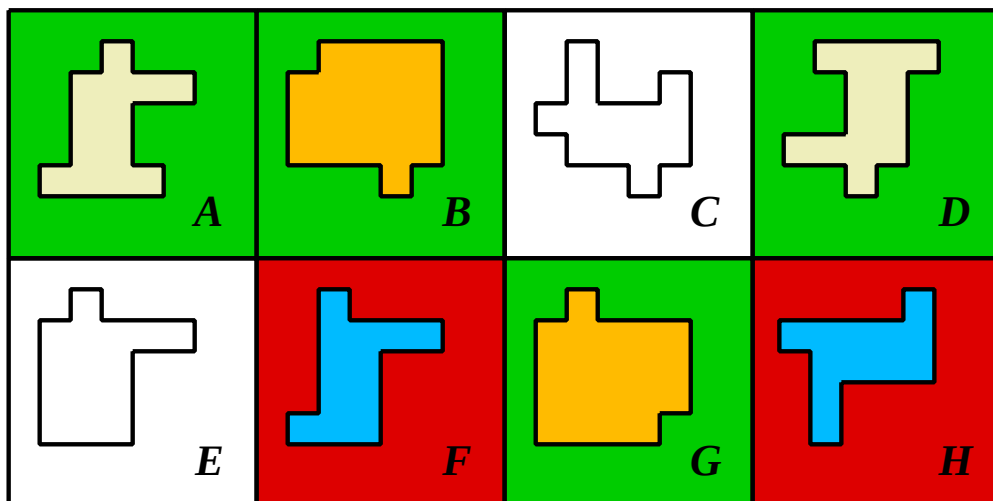


5.4 Answers

GCSE Mathematics Ratio and Similarity

5.4.1 Solutions (5.1 Congruent Shapes)

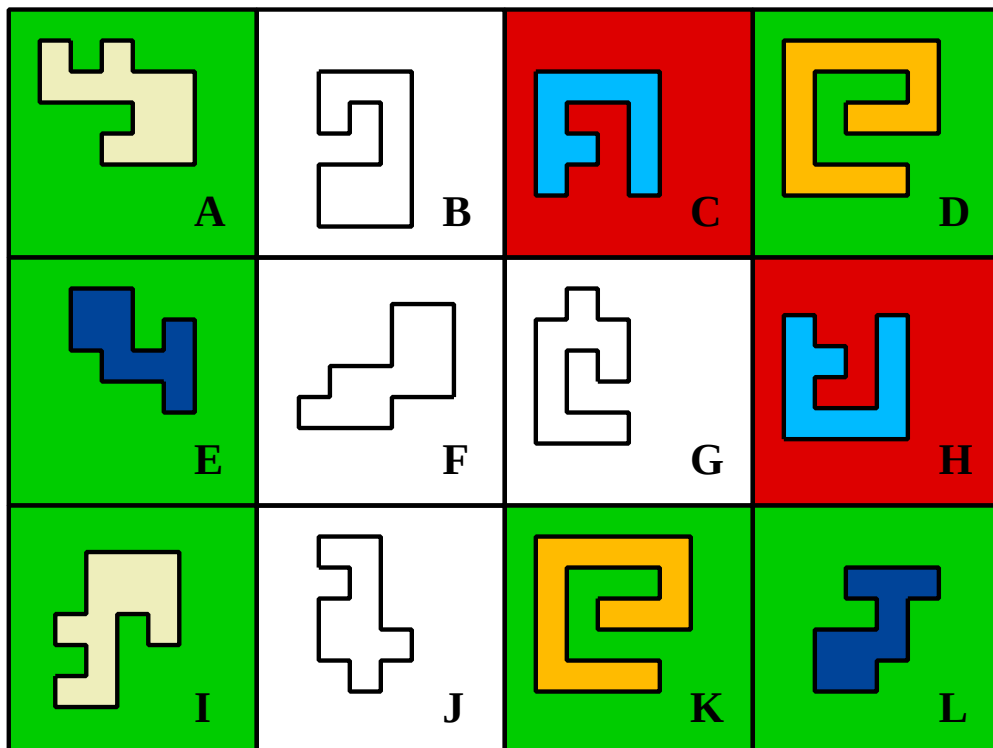


- (i) A and D are directly congruent
- (ii) H and F are indirectly congruent.
- (iii) B and G are directly congruent

[6 marks]

5.4.2 Solutions (5.2 Exercise)

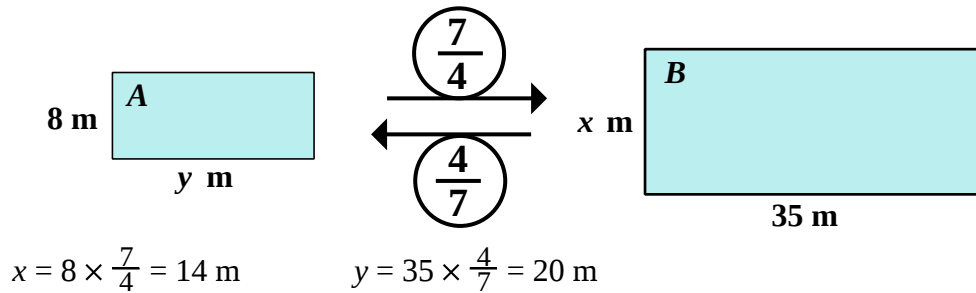
Answer 1



[6 marks]

5.4.3 Solutions (5.3 Test Revision)

Answer 1



[2 marks]

Answer 2

$$15 \times \frac{9}{3} = 45 \text{ cm}$$

Answer 3

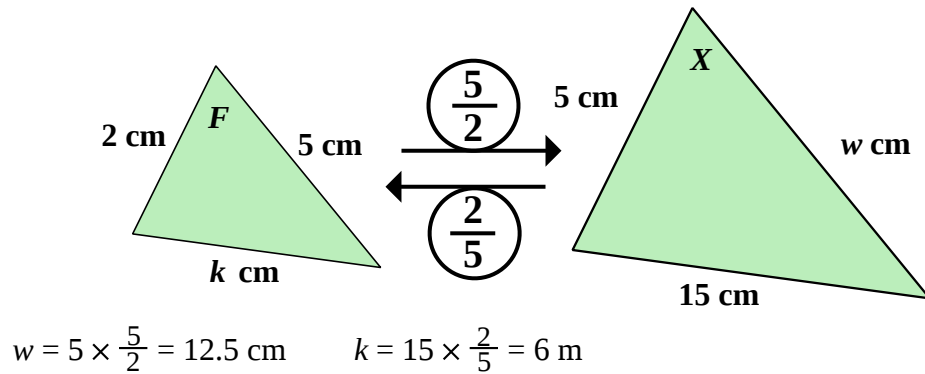
$$55 \times \frac{3}{5} = 33 \text{ m}$$

Answer 4

26 cm by 39 cm

[2, 2, 2 marks]

Answer 5



[3 marks]

Answer 6

(i) $\frac{7}{2}$

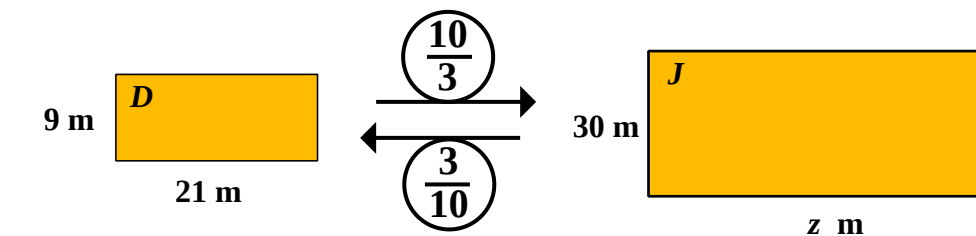
(ii) $\frac{7}{3}$

(iii) $\frac{7}{5}$

(iv) $\frac{1}{3}$

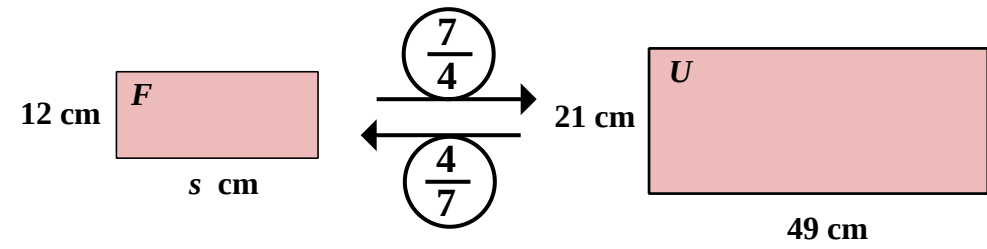
[4 marks]

Answer 7



[3 marks]

Answer 8



$$s = 49 \times \frac{4}{7} = 28 \text{ cm}$$

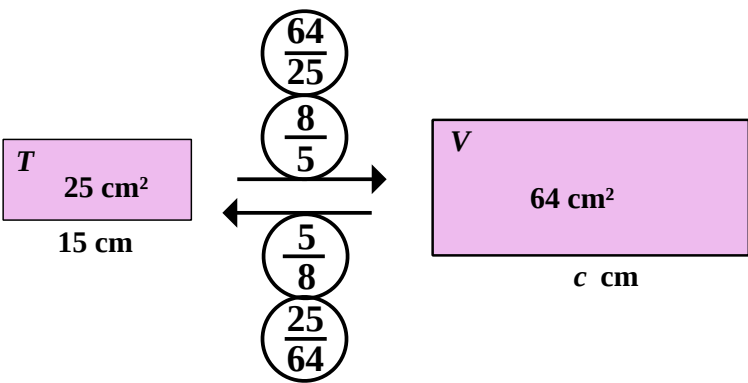
[3 marks]

Answer 9

- | | | |
|-----------------|----------------|---------------|
| (i) | (ii) | (iii) |
| $\frac{49}{25}$ | $\frac{10}{7}$ | $\frac{3}{2}$ |

[3 marks]

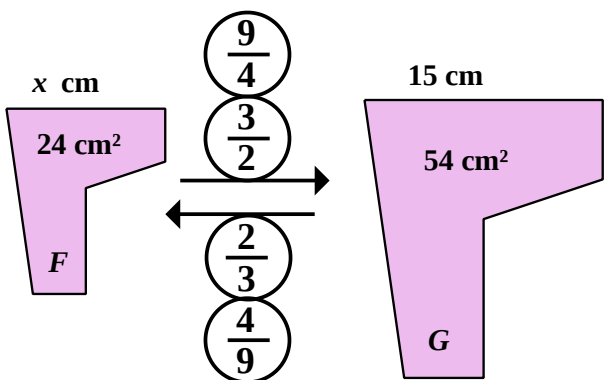
Answer 10



$$c = 15 \times \frac{8}{5} = 24 \text{ cm}$$

[3 marks]

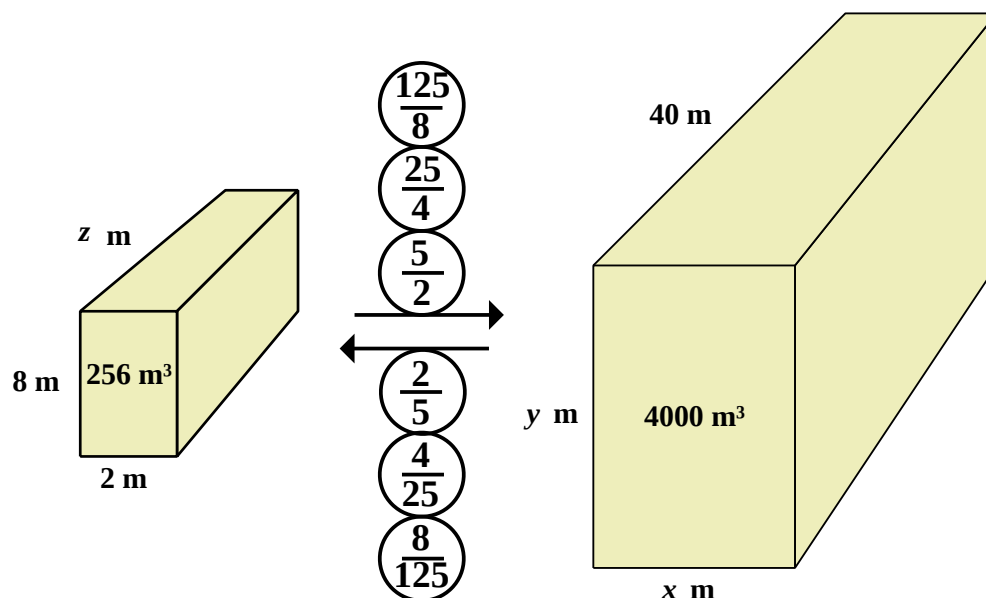
Answer 11



$$x = 15 \times \frac{2}{3} = 10 \text{ cm}$$

[3 marks]

Answer 12



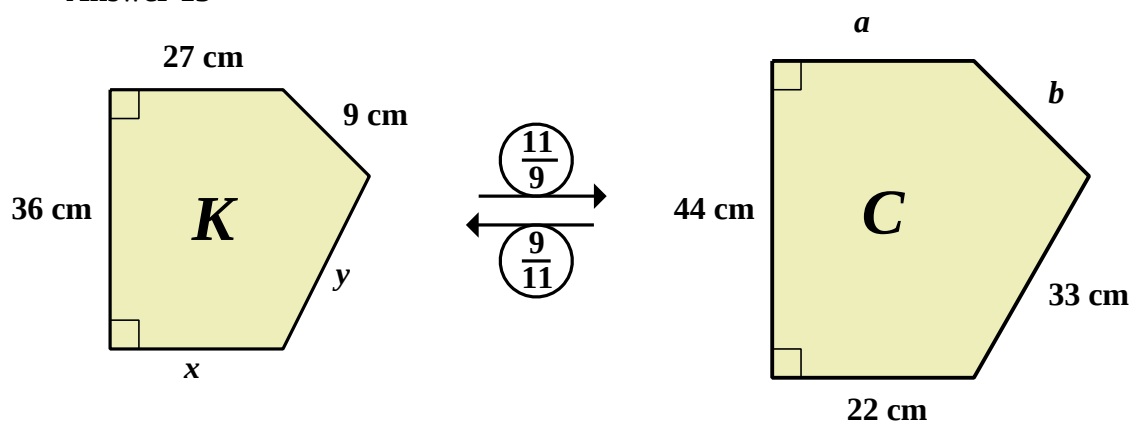
(i) $x = 2 \times \frac{5}{2} = 5 \text{ m}$ $y = 8 \times \frac{5}{2} = 20 \text{ m}$ $z = 40 \times \frac{2}{5} = 16 \text{ m}$

[3 marks]

(ii) $\frac{25}{4}$

[1 mark]

Answer 13

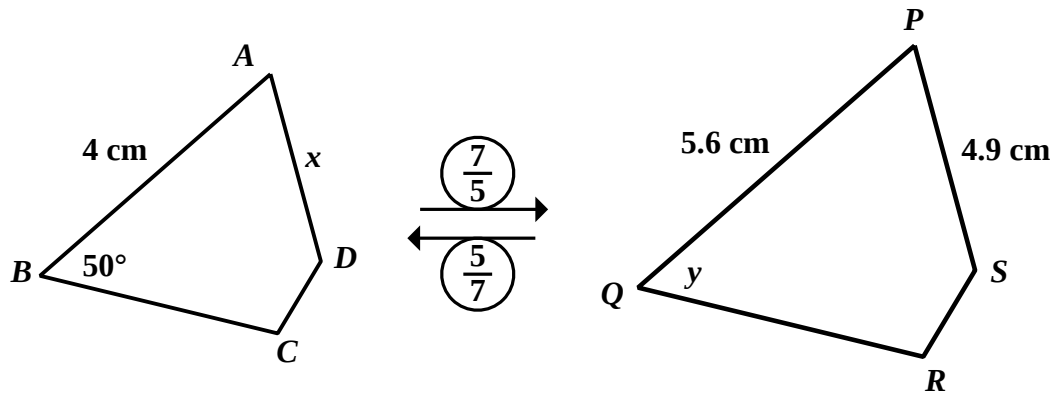


$a = 27 \times \frac{11}{9}$ $b = 9 \times \frac{11}{9}$ $x = 22 \times \frac{9}{11}$ $y = 33 \times \frac{9}{11}$

$a = 33 \text{ cm}$ $b = 11 \text{ cm}$ $x = 18 \text{ cm}$ $y = 27 \text{ cm}$

[4 marks]

Answer 14



$$x = 4.9 \times \frac{5}{7}$$
$$x = 3.5 \text{ cm}$$
$$y = 50^\circ$$

[3 marks]

[3 marks]

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Teachers may obtain detailed worked solutions to the exercises by email from MHHShrewsbury@Gmail.com