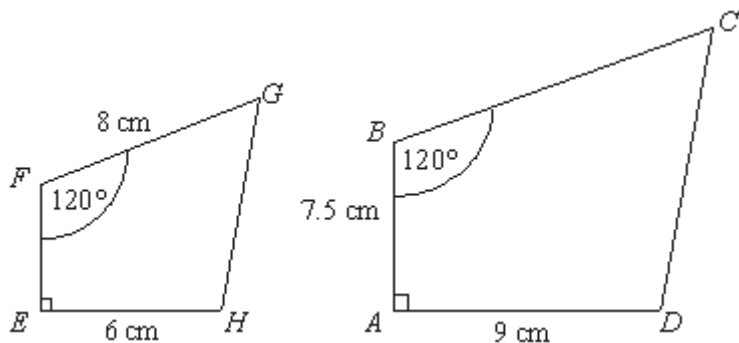


Q1. Shapes $ABCD$ and $EFGH$ are mathematically similar.



Diagrams **NOT** accurately drawn

(a) Calculate the length of BC .

..... cm

(2)

(b) Calculate the length of EF .

..... cm

(2)
(Total 4 marks)

M1.

| | Working | Answer | Mark | Additional Guidance |
|-----|--------------------------|--------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) | $\frac{3}{2} \times 8$ | 12 | 2 | $\frac{9}{6}$ or $\frac{6}{9}$ or $\frac{8}{6}$ or $\frac{6}{8}$ M1 for $\frac{9}{6}$ or $\frac{6}{9}$ or $\frac{8}{6}$ or $\frac{6}{8}$ A1 cao |
| (b) | $\frac{2}{3} \times 7.5$ | 5 | 2 | $\frac{9}{6}$ or $\frac{6}{9}$ or $\frac{9}{7.5}$ or $\frac{7.5}{9}$ or $\frac{"12"}{8}$ or $\frac{8}{"12"}$ $\frac{"12"}{7.5}$ or $\frac{7.5}{"12"}$ M1 for $\frac{9}{6}$ or $\frac{6}{9}$ or $\frac{9}{7.5}$ or $\frac{7.5}{9}$ or $\frac{"12"}{8}$ or $\frac{8}{"12"}$ or $\frac{"12"}{7.5}$ or $\frac{7.5}{"12"}$ A1 cao |
| | | | | Total for Question: 4 marks |

- E1.** Those candidates who worked with scale factors were usually successful. Errors were more common in part (b) where some candidates multiplied 7.5 by the scale factor rather than divide. A quick look at the diagram ought to have alerted these candidates to the fact that the length of EF could not possibly be 11.25 cm. Many candidates, though, did not work with scale factors but assumed that because AD was 3 cm longer than EH then each side in $ABCD$ was 3cm longer than the corresponding side in $EFGH$. This resulted in 11 cm and 4.5 cm being very common incorrect answers in part (a) and part (b) respectively.