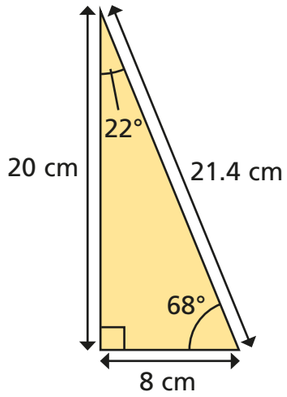
# Use sine, cosine and tangent to find missing side lengths

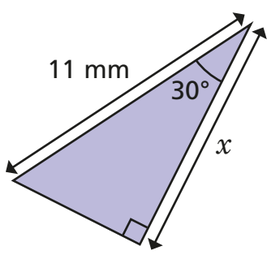
**1** Tick the statements that are true for this triangle.




- $\sin 68° = \frac{20}{21.4}$
- $\cos 68° = \frac{8}{21.4}$
- $\sin 22° = \frac{20}{21.4}$
- $\tan 22° = \frac{8}{20}$
- $\tan 68° = \frac{8}{20}$
- $\cos 22° = \frac{20}{8}$
- $\sin 22° = \frac{8}{20}$
- $\cos 68° = \frac{21.4}{20}$

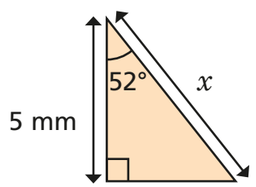
**2** State whether you would use the sine, cosine or tangent ratio to find $x$ in the triangles.

**a)**



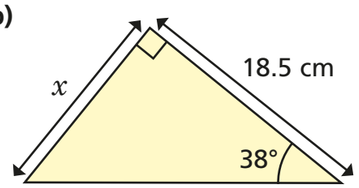

_____

**c)**



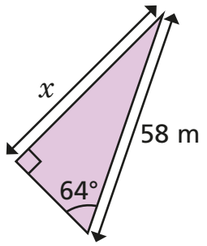

_____

**b)**




_____

**d)**

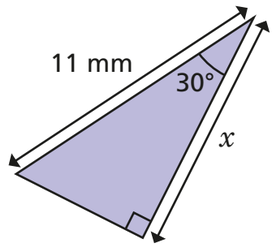



_____

**3** Work out the value of $x$ in each triangle.

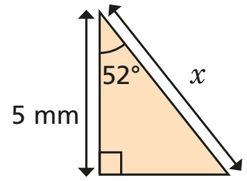
Give your answers to 1 decimal place.

**a)**



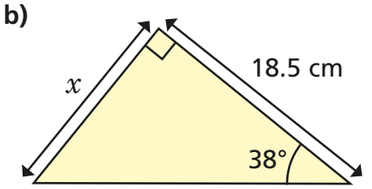

$x =$ _____ mm

**c)**



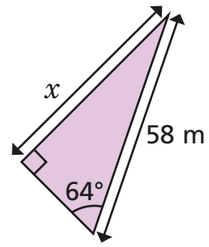

$x =$ _____ mm

**b)**




$x =$ _____ cm

**d)**

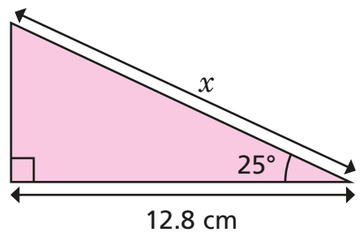



$x =$ _____ m

**4** Work out the value of $x$ in each triangle.

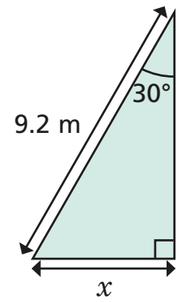
Give your answers to 1 decimal place.

**a)**



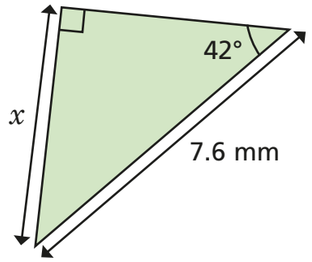

$x =$ _____ cm

**b)**



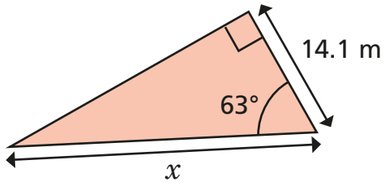

$x =$ _____ m

**c)**



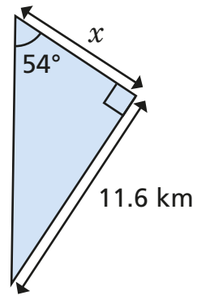

$x =$ ☐ mm

**d)**



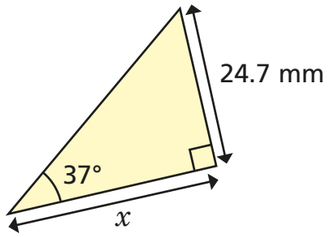

$x =$ ☐ m

**e)**




$x =$ ☐ km

**f)**




$x =$ ☐ mm

**5** A ladder is 4.2 m long and is leaning against a wall.

The angle between the ladder and the floor is 65°.

**a)** Draw and label a diagram to show the right-angled triangle formed by the floor, the ladder and the wall.

**b)** How far from the wall is the foot of the ladder?

Give your answer to 3 significant figures.

☐

**c)** How far up the wall does the ladder reach?

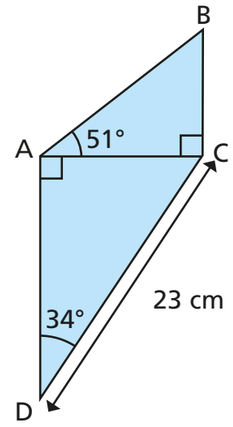
Give your answer to 3 significant figures.

☐

**6** ABC and ACD are right-angled triangles.

Find the length AB.

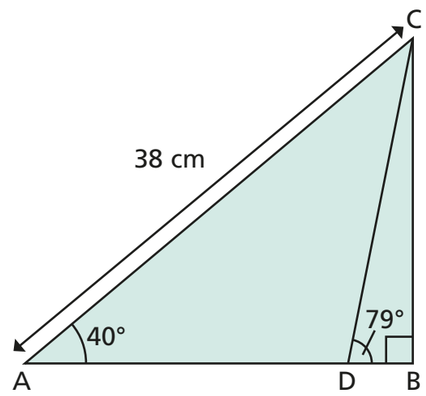
Give your answer to 1 decimal place.




☐

**7** Find the length BD.

Give your answer to 1 decimal place.




☐