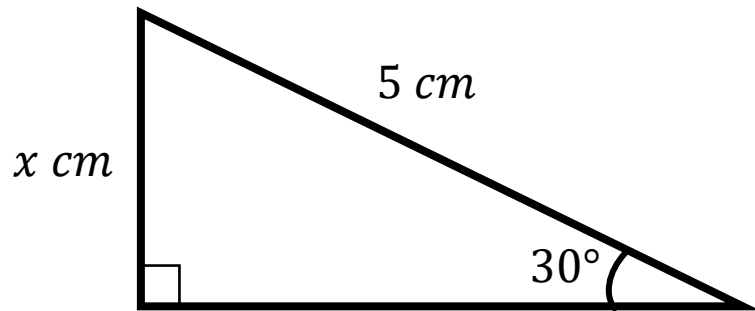


Trigonometry (basic)

CONTENTS

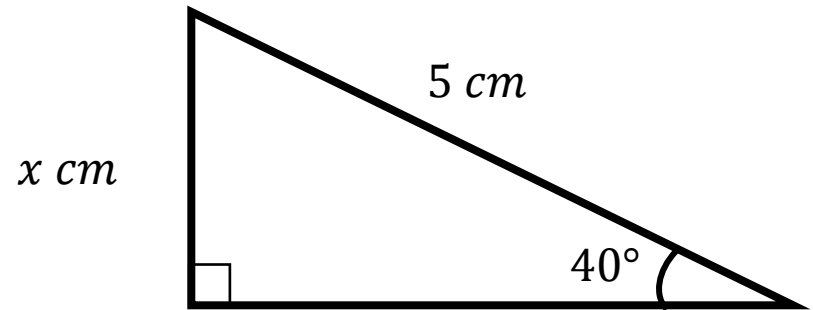
Worked example

Calculate x :



Your turn

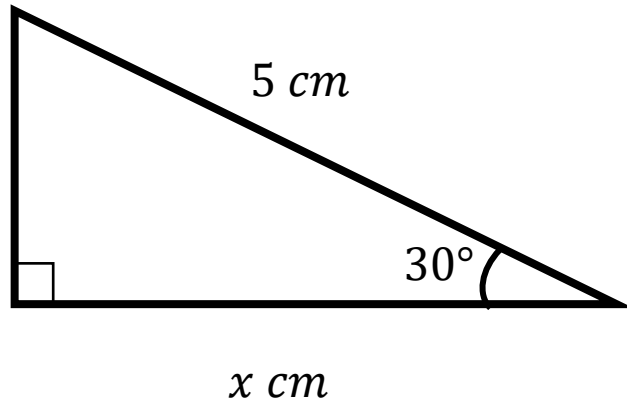
Calculate x :



$$x = 3.21 \text{ (2 dp)}$$

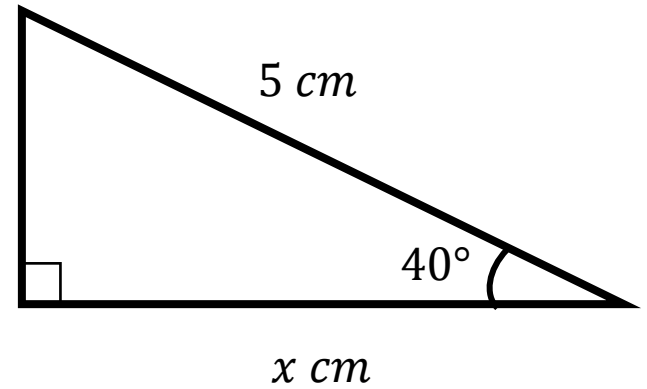
Worked example

Calculate x :



Your turn

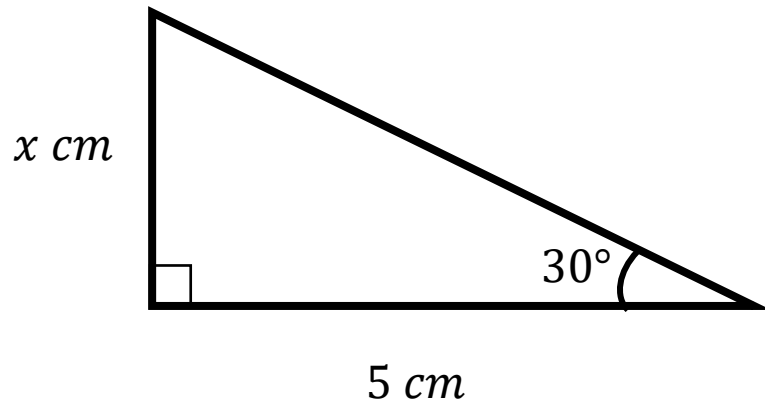
Calculate x :



$$x = 3.83 \text{ (2 dp)}$$

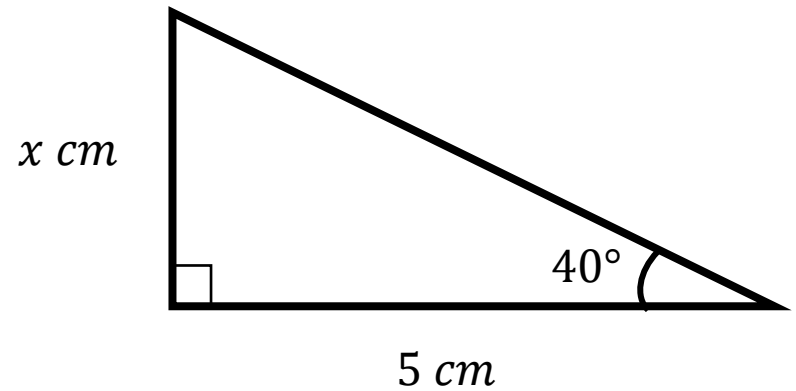
Worked example

Calculate x :



Your turn

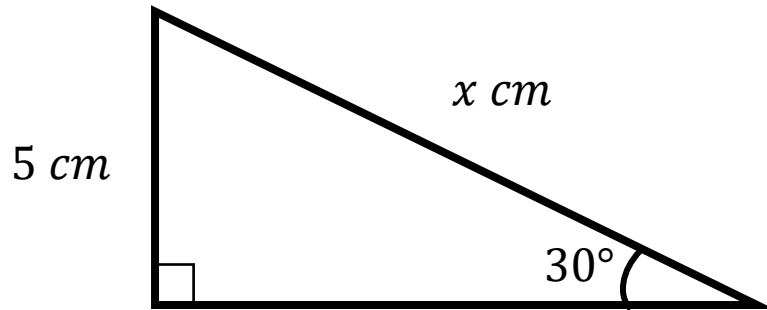
Calculate x :



$$x = 4.20 \text{ (2 dp)}$$

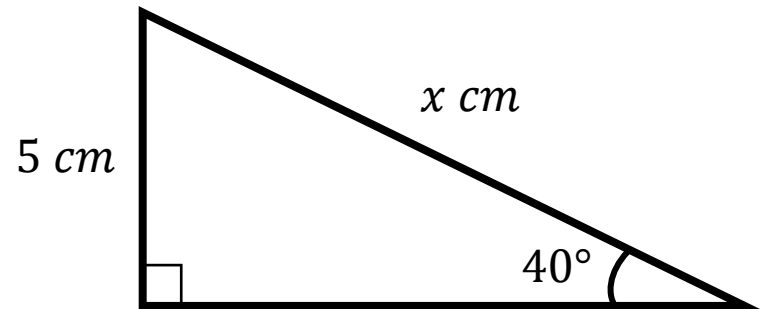
Worked example

Calculate x :



Your turn

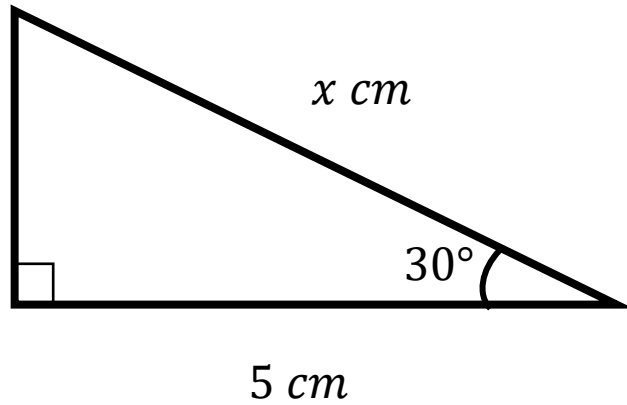
Calculate x :



$$x = 7.78 \text{ (2 dp)}$$

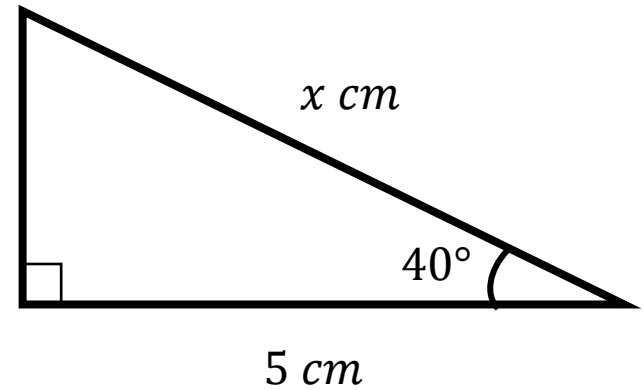
Worked example

Calculate x :



Your turn

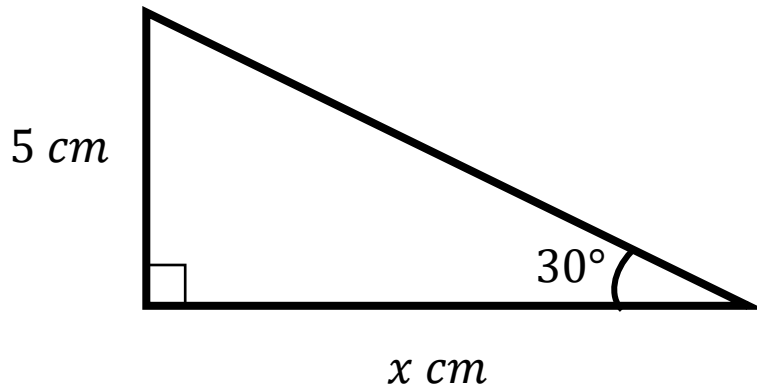
Calculate x :



$$x = 6.53 \text{ (2 dp)}$$

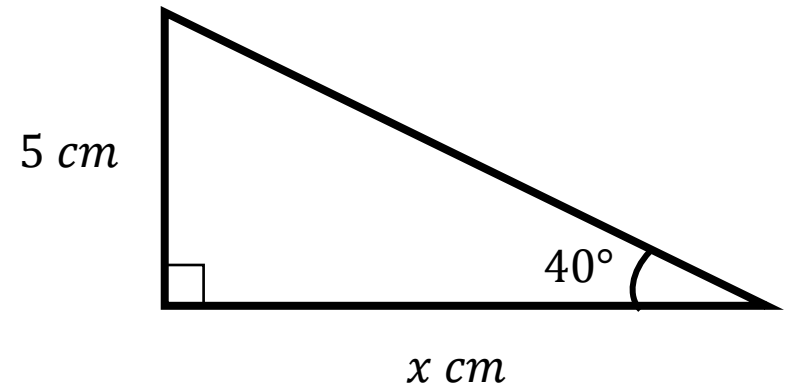
Worked example

Calculate x :



Your turn

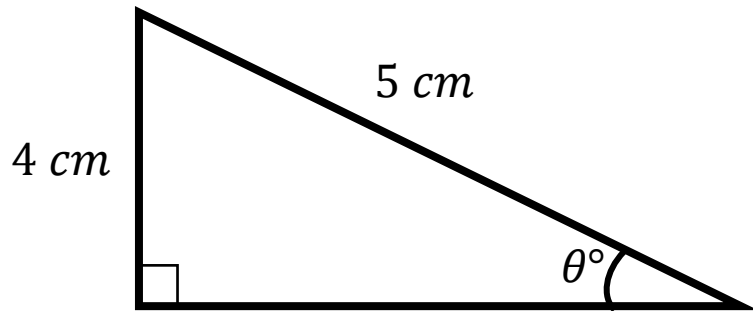
Calculate x :



$$x = 5.96 \text{ (2 dp)}$$

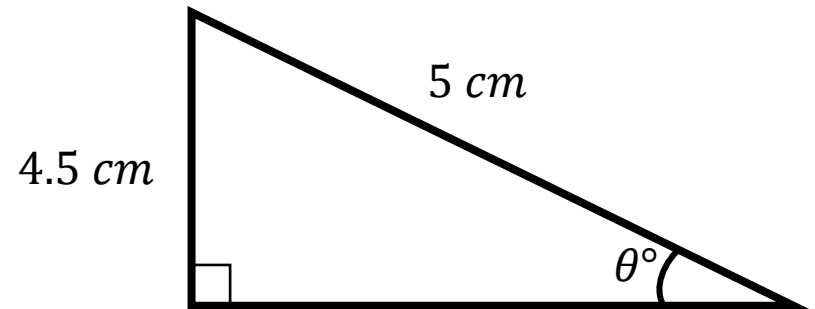
Worked example

Calculate θ :



Your turn

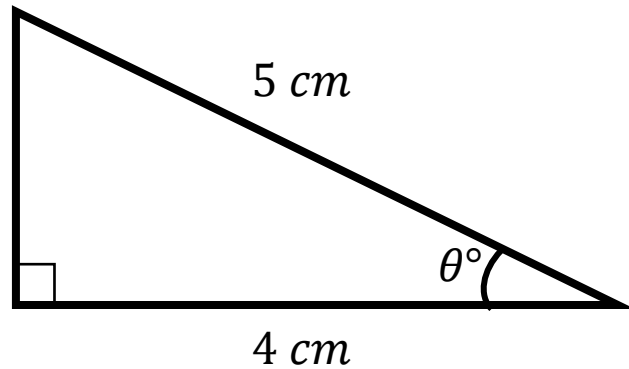
Calculate θ :



$$\theta = 64.16 \text{ (2 dp)}$$

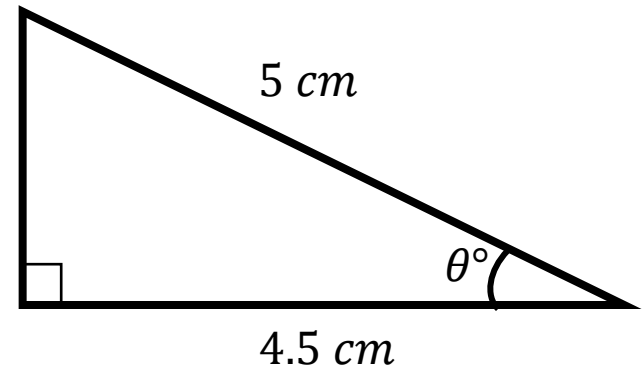
Worked example

Calculate θ :



Your turn

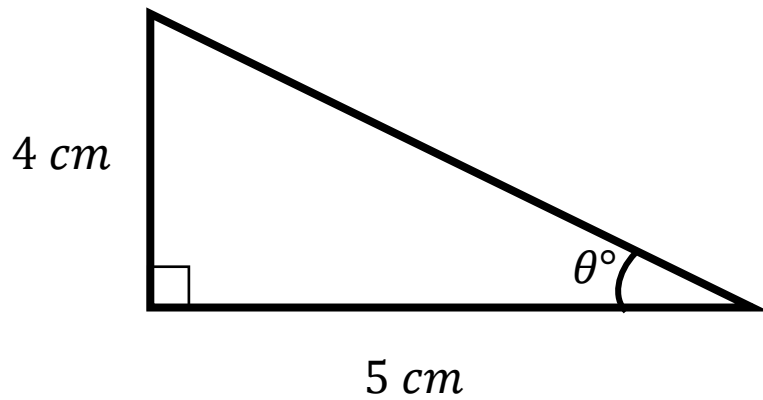
Calculate θ :



$$\theta = 25.84 \text{ (2 dp)}$$

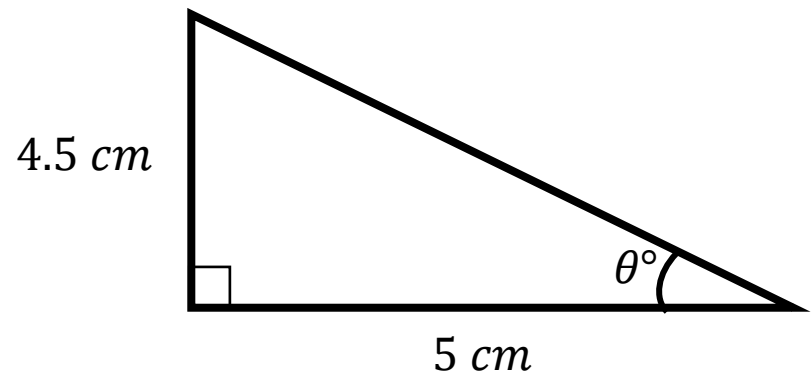
Worked example

Calculate θ :



Your turn

Calculate θ :



$$\theta = 41.99 \text{ (2 dp)}$$

Worked example

Given that $\sin \theta = \frac{3}{5}$, calculate:

$$\cos \theta$$

$$\tan \theta$$

Your turn

Given that $\sin \theta = \frac{12}{13}$, calculate:

$$\cos \theta$$

$$\frac{5}{13}$$

$$\tan \theta$$

$$\frac{12}{5}$$

Worked example

Given that $\cos \theta = \frac{4}{5}$, calculate:

$$\sin \theta$$

$$\tan \theta$$

Your turn

Given that $\cos \theta = \frac{5}{13}$, calculate:

$$\sin \theta$$

$$\frac{12}{13}$$

$$\tan \theta$$

$$\frac{12}{5}$$

Worked example

Given that $\tan \theta = \frac{3}{4}$, calculate:

$$\sin \theta$$

$$\cos \theta$$

Your turn

Given that $\tan \theta = \frac{12}{5}$, calculate:

$$\sin \theta$$

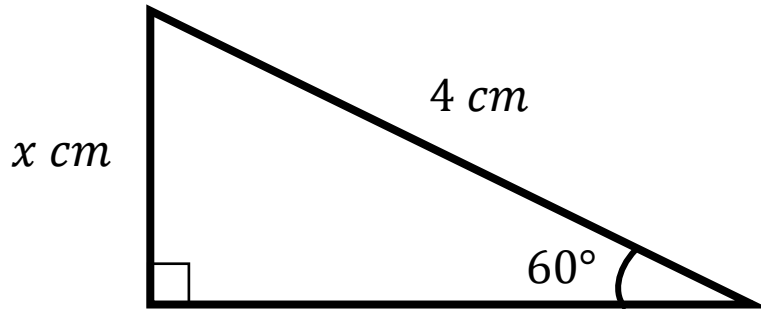
$$\frac{12}{13}$$

$$\cos \theta$$

$$\frac{5}{13}$$

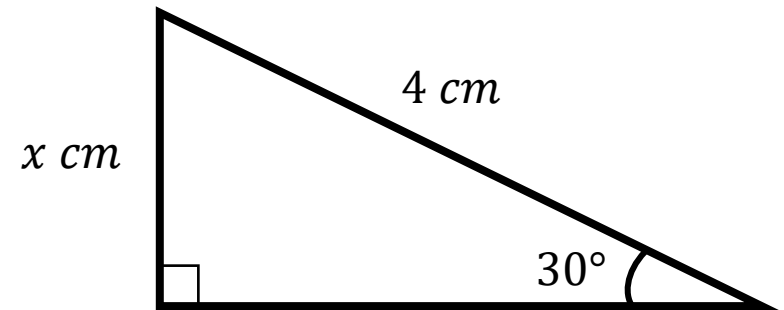
Worked example

Without a calculator, calculate x :



Your turn

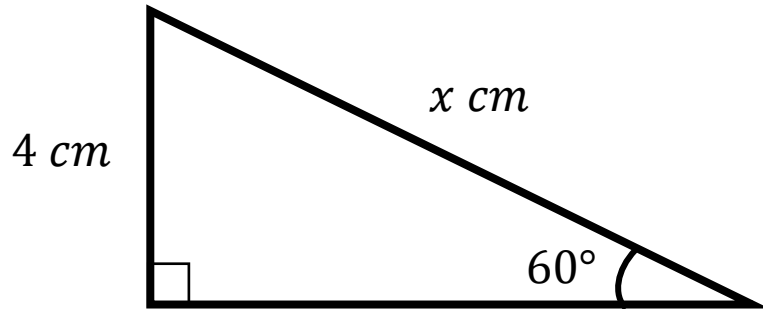
Without a calculator, calculate x :



$$x = 2$$

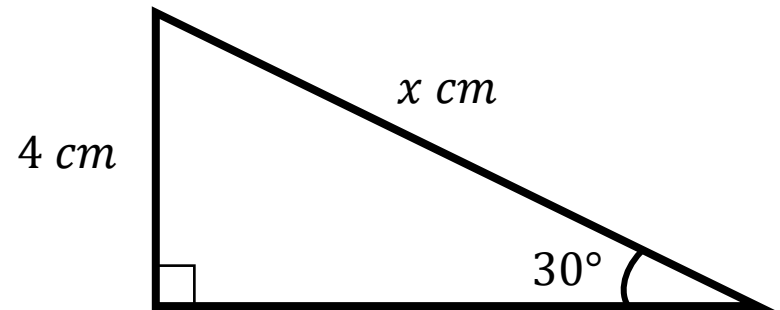
Worked example

Without a calculator, calculate x :



Your turn

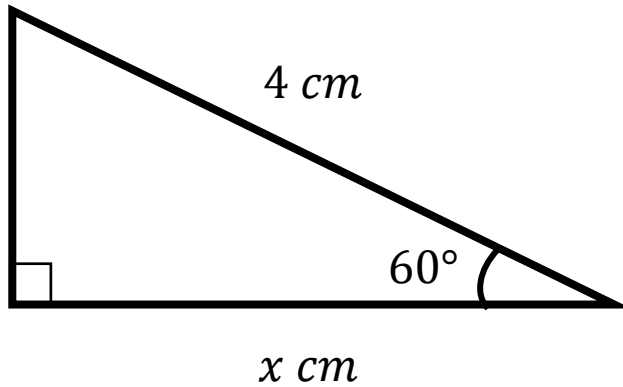
Without a calculator, calculate x :



$$x = 8$$

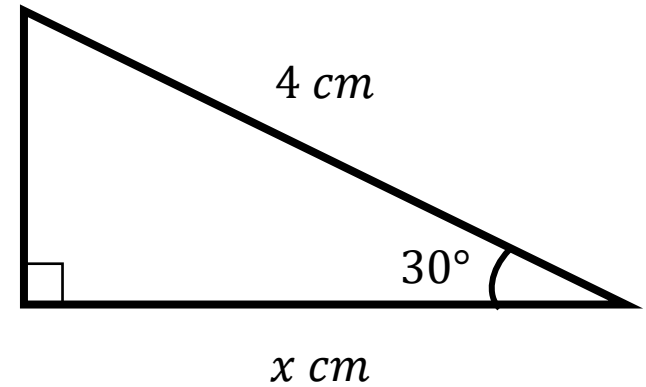
Worked example

Without a calculator, calculate x :



Your turn

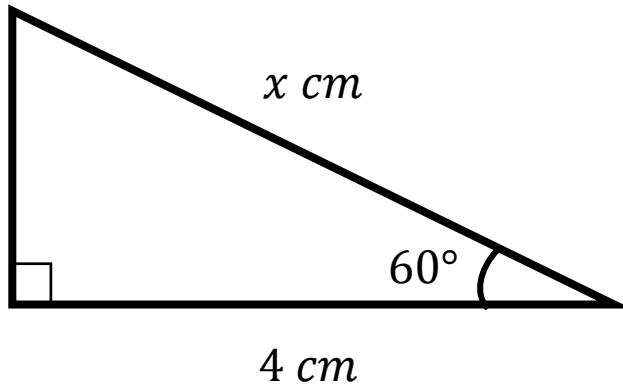
Without a calculator, calculate x :



$$x = 2\sqrt{3}$$

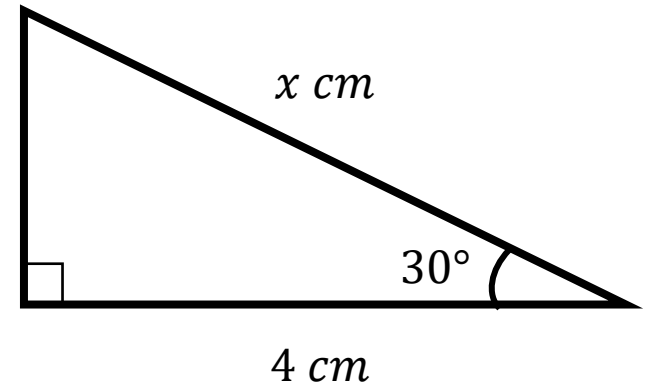
Worked example

Without a calculator, calculate x :



Your turn

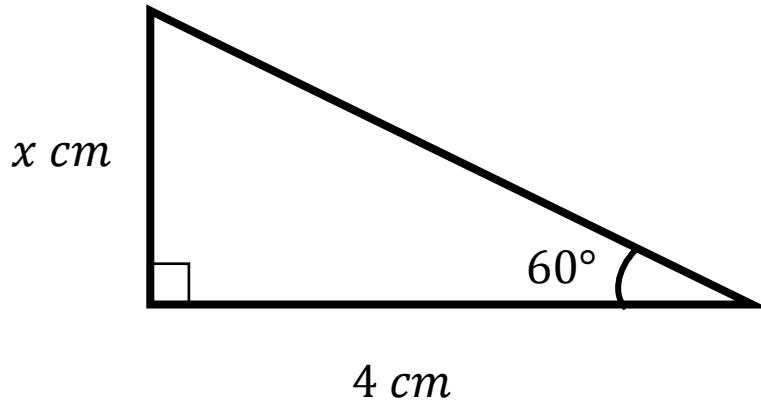
Without a calculator, calculate x :



$$x = \frac{8\sqrt{3}}{3}$$

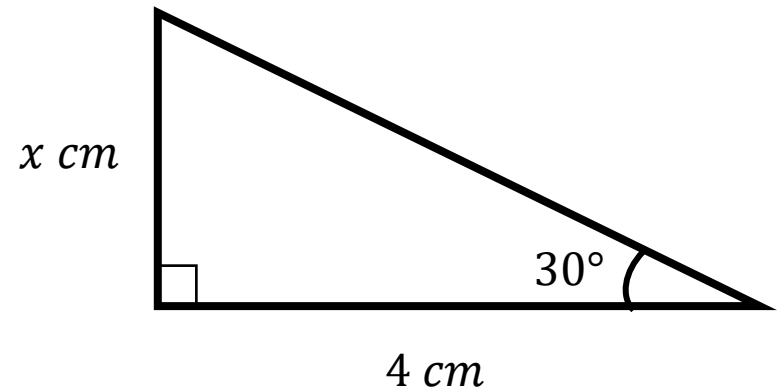
Worked example

Without a calculator, calculate x :



Your turn

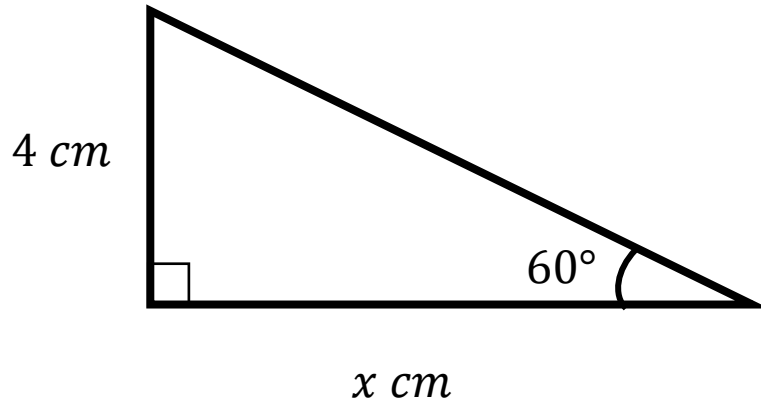
Without a calculator, calculate x :



$$x = \frac{4\sqrt{3}}{3}$$

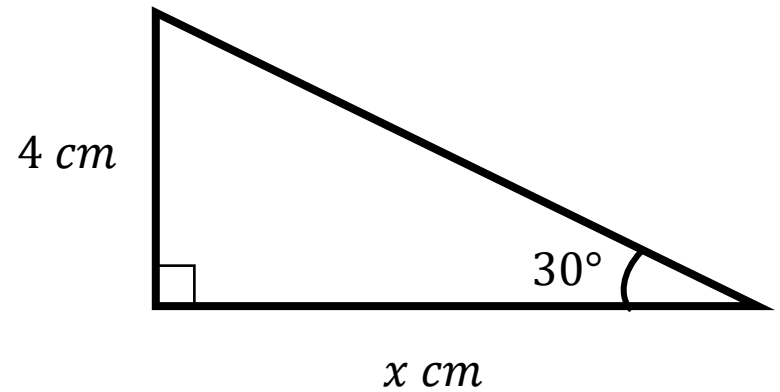
Worked example

Without a calculator, calculate x :



Your turn

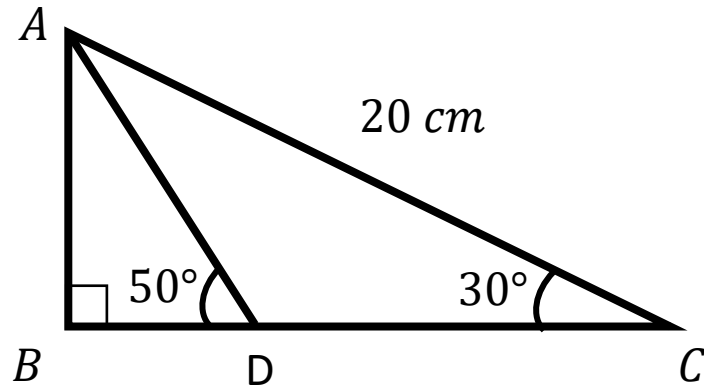
Without a calculator, calculate x :



$$x = 4\sqrt{3}$$

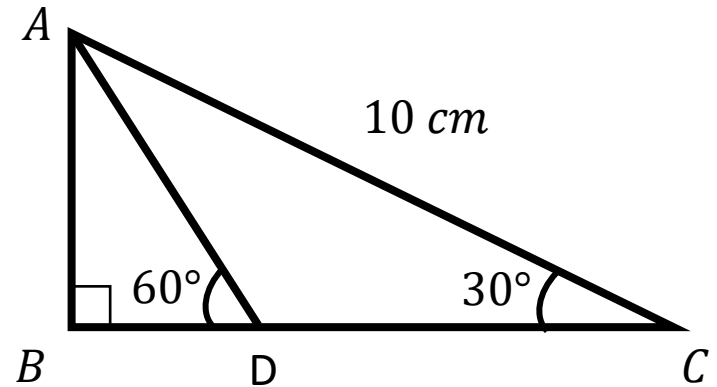
Worked example

Calculate the length of BD :



Your turn

Calculate the length of BD :

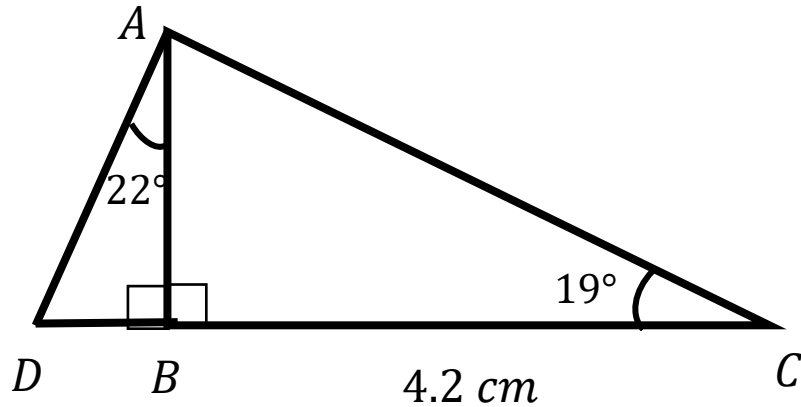


2.89 cm (2 dp)

Worked example

BC is 4.2 *cm*.

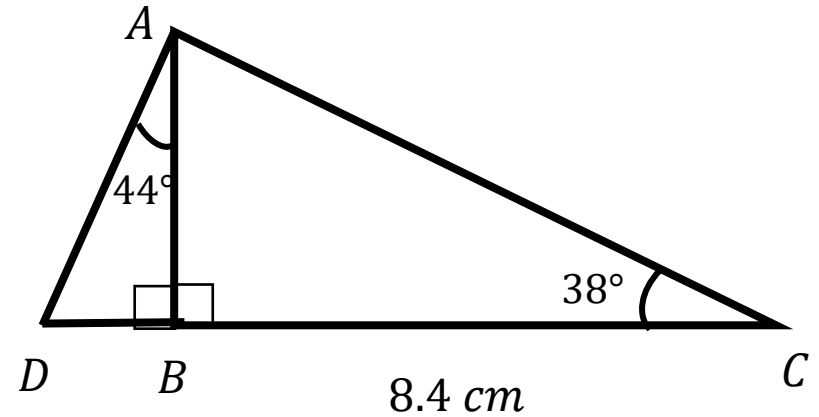
Calculate the length of *AD*:



Your turn

BC is 8.4 *cm*.

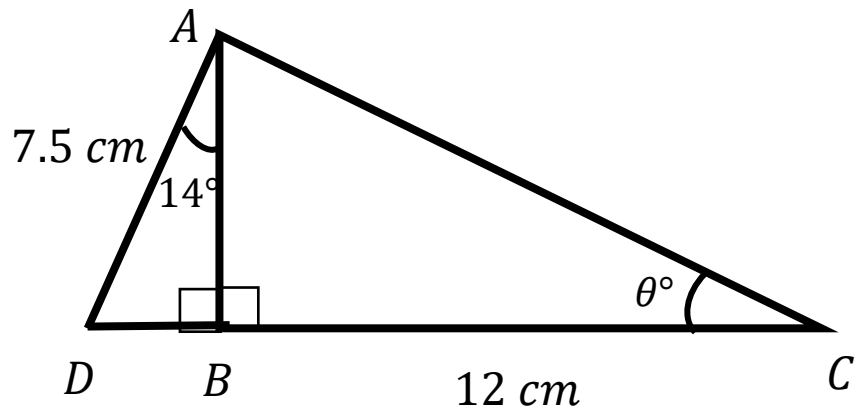
Calculate the length of *AD*:



9.12 *cm* (2 dp)

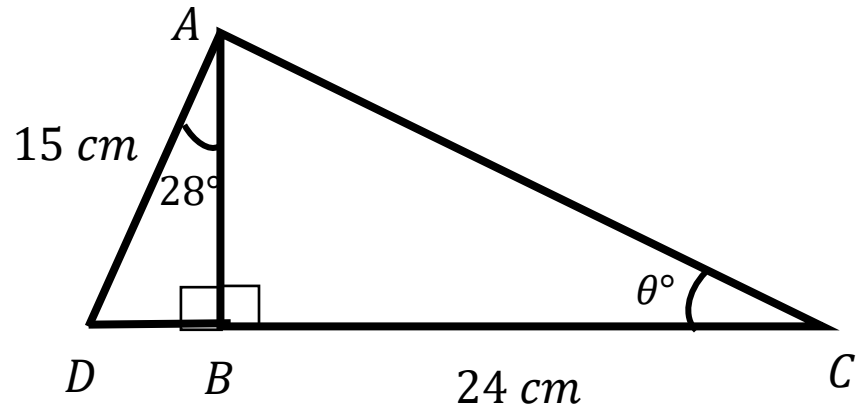
Worked example

BC is 12 *cm*.
Calculate θ



Your turn

BC is 24 *cm*.
Calculate θ



$$\theta = 28.89 \text{ (2 dp)}$$

Worked example

A tree is a horizontal distance of 5 *m* away from where you are standing.

Using a clinometer you measure the angle of elevation from the ground to the top of the tree.

This angle is 30° . How tall is the tree?

Your turn

A tree is a horizontal distance of 5 *m* away from where you are standing.

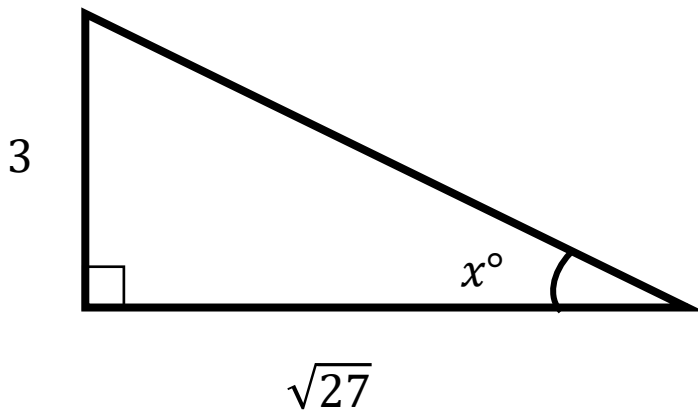
Using a clinometer you measure the angle of elevation from the ground to the top of the tree.

This angle is 60° . How tall is the tree?

8.66 *m* (2 dp)

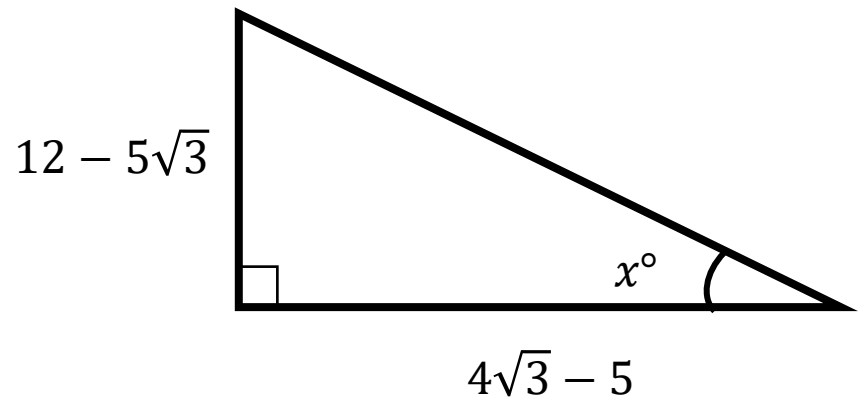
Worked example

Calculate x :



Your turn

Calculate x :



$$x = 60$$

Worked example

Show that $5 \sin 30^\circ \times \cos 30^\circ \times 8 \tan 30^\circ$ is an integer

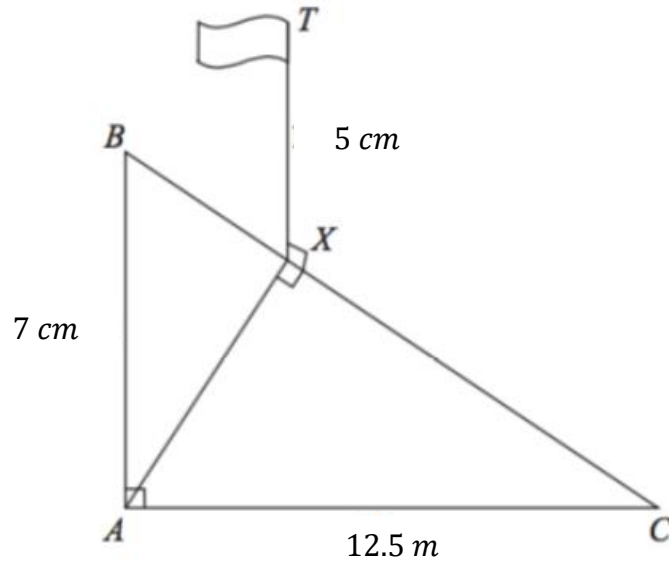
Your turn

Show that $2 \sin 60^\circ \times 5 \cos 60^\circ \times 6 \tan 60^\circ$ is an integer

45

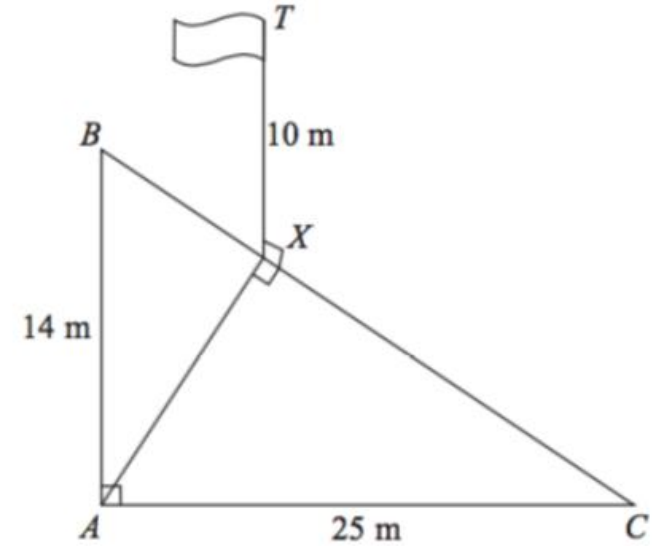
Worked example

Calculate the angle of elevation of T from A :



Your turn

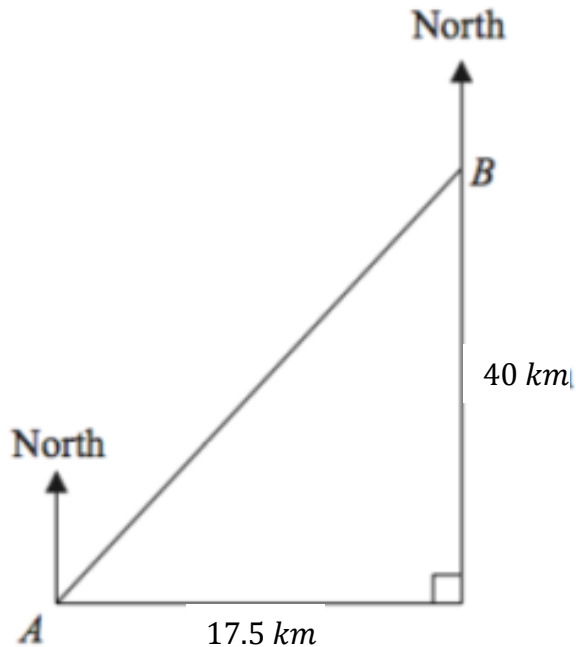
Calculate the angle of elevation of T from A :



39.3°

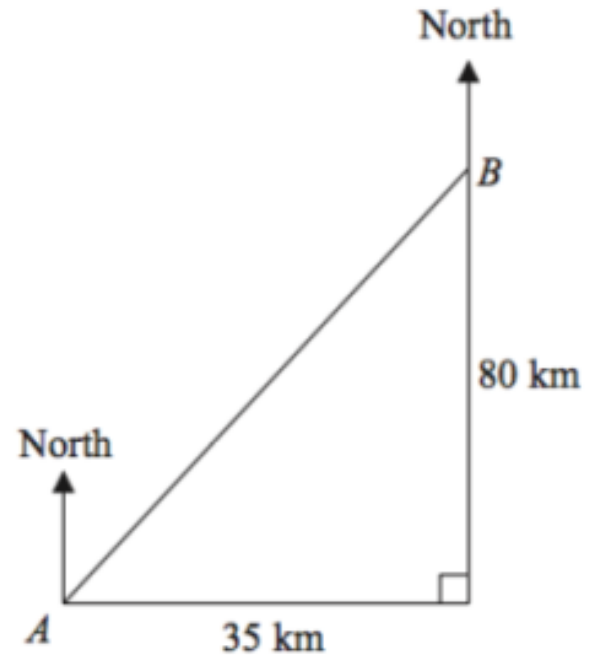
Worked example

Work out the bearing of town B from town A



Your turn

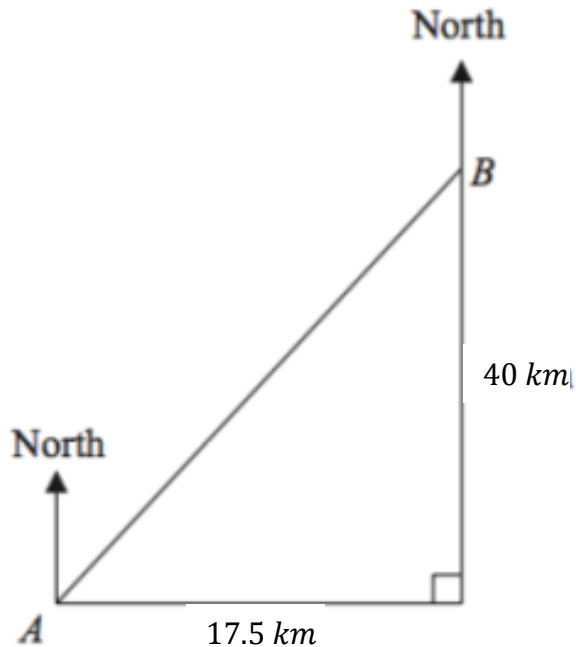
Work out the bearing of town B from town A



23.63° (2 dp)

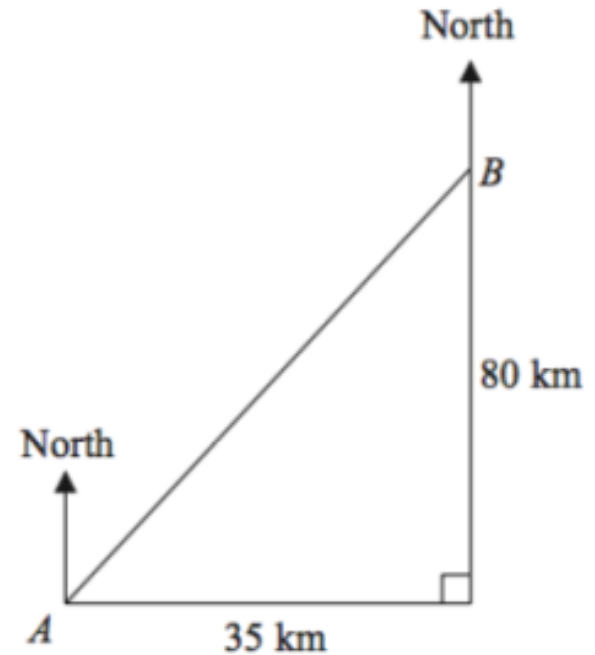
Worked example

Work out the bearing of town A from town B



Your turn

Work out the bearing of town A from town B



203.63° (2 dp)