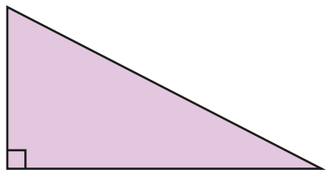
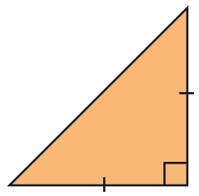
Work fluently with the hypotenuse, opposite and adjacent sides

1 Label the hypotenuse on the right-angled triangles.

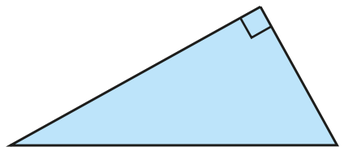
a)



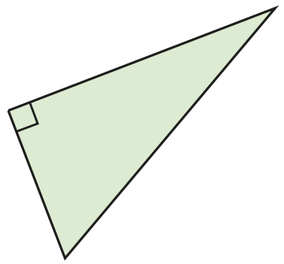
b)



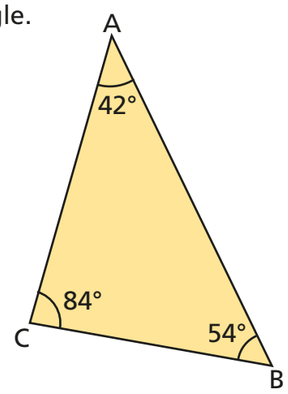
c)



d)



2 Annie is labelling this triangle.



She says, "AB is the hypotenuse because it is opposite the largest angle."

Do you agree with Annie? _____

Explain your answer.

_____

_____

3 Decide whether each statement is true or false.

The hypotenuse is the largest side of any triangle. _____

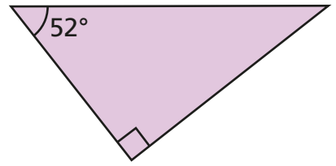
Only right-angled triangles have a hypotenuse. _____

The hypotenuse of a right-angled triangle is always opposite the right angle. _____

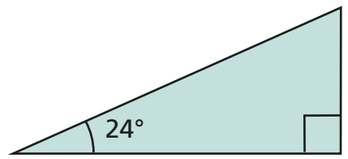
Discuss your answers with a partner.

4 Label the opposite, adjacent and hypotenuse on the right-angled triangles.

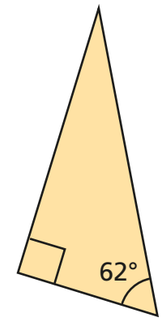
a)



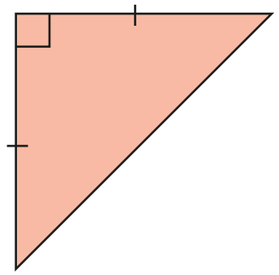
b)



c)



d)



How was it possible to label the triangle in part d) given that the only angle labelled was the right angle?

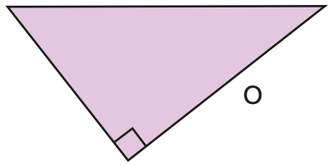
_____

_____

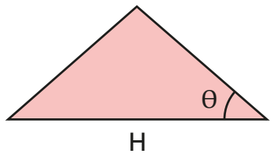
5 Complete the labelling of the right-angled triangles to include:

- right angle (square notation)
- given angle – θ
- hypotenuse – H
- adjacent – A
- opposite – O

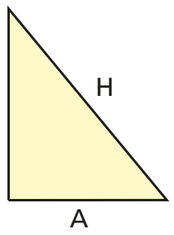
a)



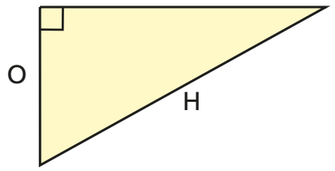
b)



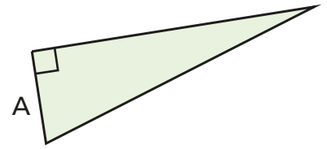
c)



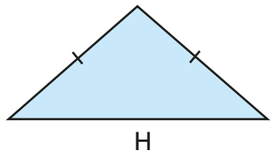
d)



e)



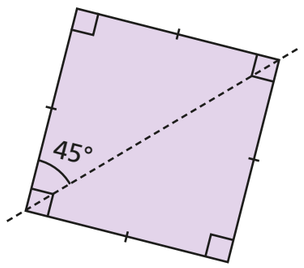
f)



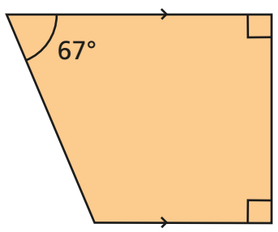
6 Identify right-angled triangles in the shapes that include the given angle.

Label the hypotenuse, adjacent and opposite sides of each triangle.

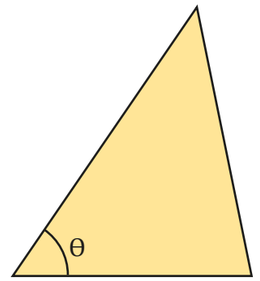
a)



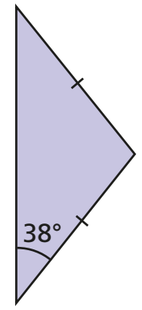
b)



c)

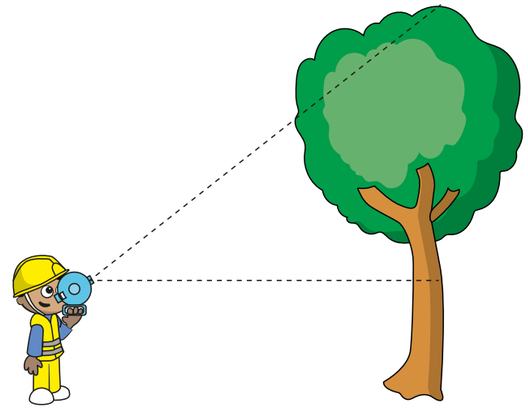


d)



7 Mr Khan is finding the height of a tree using a clinometer.

A clinometer measures the angle between the horizontal and the top of a large object or building.



Complete the sentences to describe the right-angled triangle used to help calculate the height.

The distance between the clinometer and the top of the tree is

the _____

The vertical distance between the level of the clinometer and the top of

the tree is the _____

The adjacent side is _____

_____