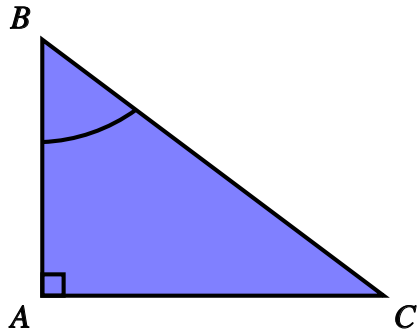


# Trigonometry 1

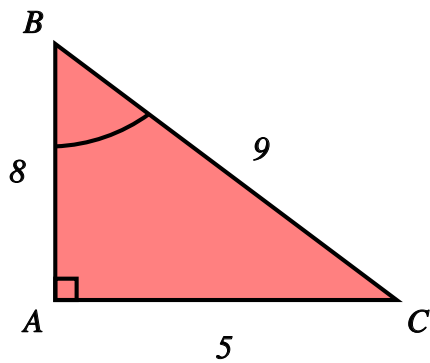
Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Mark / 15 %

1) Identify which sides are the *hypotenuse*, *adjacent* and *opposite* to the given angle ABC [1]

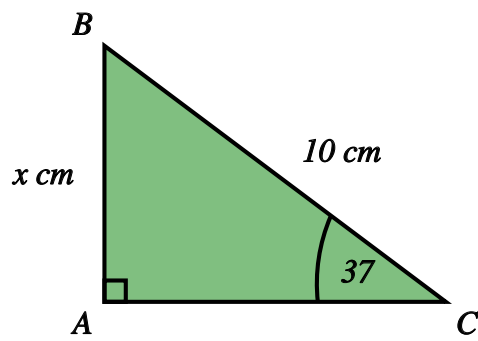


2) Express the sine of angle ABC as a ratio of the sides of triangle ABC [1]



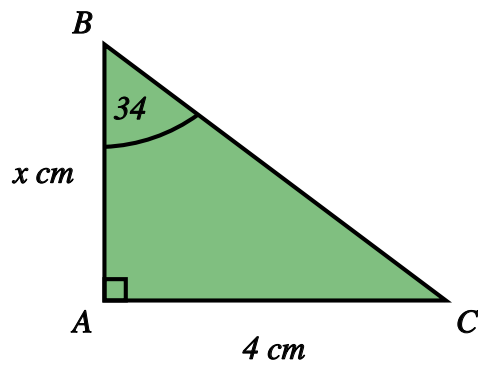
3) Find  $x$  in the triangle below, giving your answer to 3 significant figures.

[1]



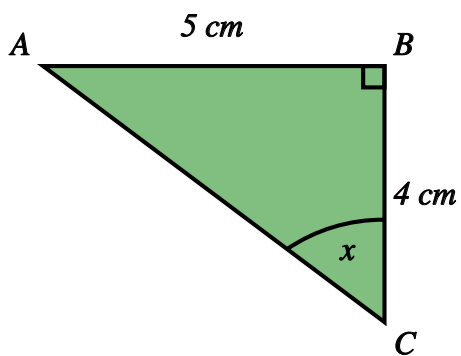
4) Find  $x$  in the triangle below, giving your answer to 3 significant figures

[1]



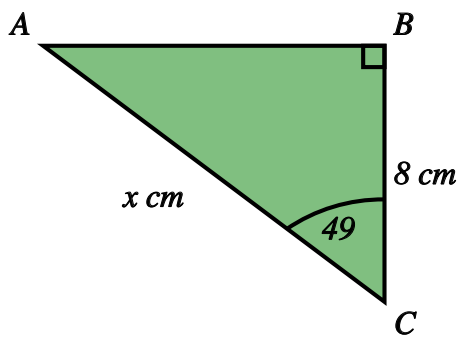
5) Find angle  $x$  in the triangle below, giving your answer to 1 decimal place.

[1]



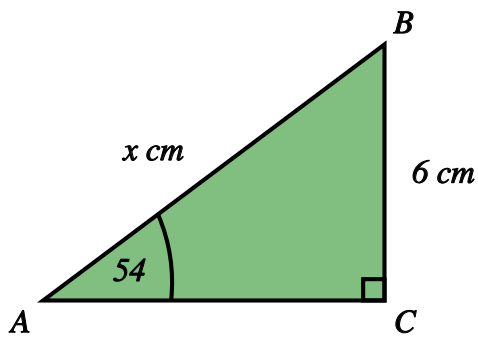
6) Find  $x$  in the triangle below, giving your answer to 3 significant figures

[1]



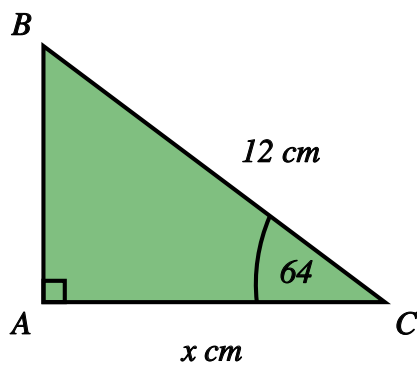
7) Find  $x$  in the triangle below, giving your answer to 3 significant figures

[1]



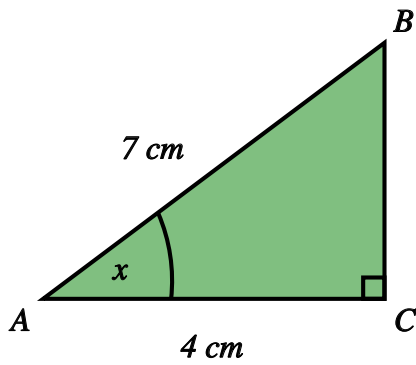
8) Find  $x$  in the triangle below, giving your answer to 3 significant figures.

[1]



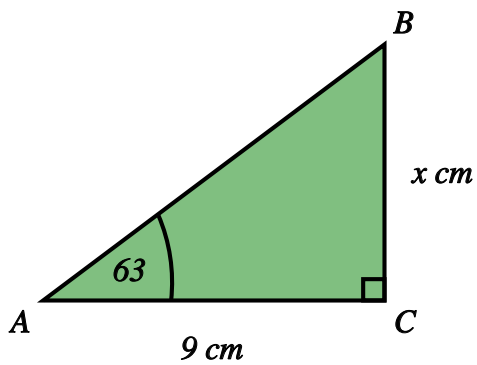
9) Find angle  $x$  in the triangle below, giving your answer to 1 decimal place.

[1]



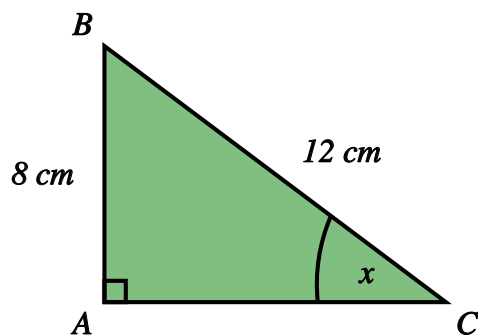
10) Find  $x$  in the triangle below, giving your answer to 3 significant figures.

[1]



11) Find angle  $x$  in the triangle below, giving your answer to 1 decimal place.

[1]



**12)** A safe angle for a ladder is about  $75^\circ$  from the ground. [1]

If you have a 3.2 metre ladder, how far from a wall should you place the base of the ladder?

Give your answer to 3 significant figures.

**13)** A safe angle for a ladder is about  $75^\circ$  from the ground. [1]

If you have a 4 metre ladder, how high can it reach up a wall?

Round your answer to 3 significant figures.

**14)** Bradley is looking up at a spaceship. The direct distance from Bradley to the spaceship is 16 km. [1]

The vertical distance from Bradley to the spaceship is 13 km.

Calculate the angle of elevation from Bradley to the spaceship, giving your answer to 1 decimal place.

**15)** The angle of elevation from Valerie to a spaceship is  $25^\circ$ . [1]

The horizontal distance from Valerie to the spaceship is 4 km.

Calculate the direct distance from Valerie to the spaceship, giving your answer to 3 significant figures.

## Solutions for the assessment Trigonometry 1

- 1) Hypotenuse is BC, Adjacent is AB, Opposite is AC
- 2)  $\sin \text{ of angle } ABC = \frac{o}{h} = \frac{5}{9}$
- 3)  $x = 6.02 \text{ cm}$
- 4)  $x = 5.93 \text{ cm}$
- 5)  $x = 51.3^\circ$
- 6)  $x = 12.2 \text{ cm}$
- 7)  $x = 7.42 \text{ cm}$
- 8)  $x = 5.26 \text{ cm}$
- 9)  $x = 55.2^\circ$
- 10)  $x = 17.7 \text{ cm}$
- 11)  $x = 41.8^\circ$
- 12) Distance = 0.828 m
- 13) Height = 3.86 m
- 14) Angle of elevation =  $54.3^\circ$
- 15) Distance = 4.41 km