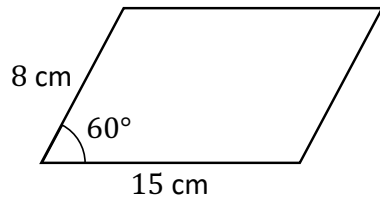


## Trigonometry with...

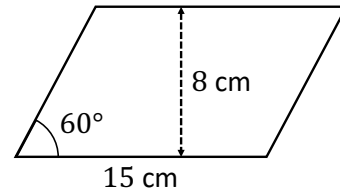
### Area

Find the parallelogram's area.



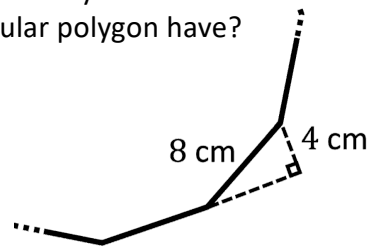
### Perimeter

Find the parallelogram's perimeter.



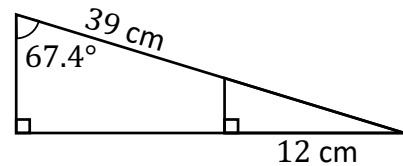
### Angles in Polygons

How many sides does the regular polygon have?



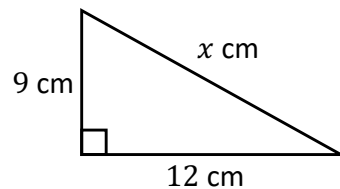
### Similar Shapes

Find the area of the big triangle.



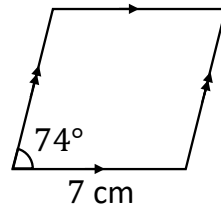
### Pythagoras

Find  $x$  using two different methods.



### Quadrilaterals

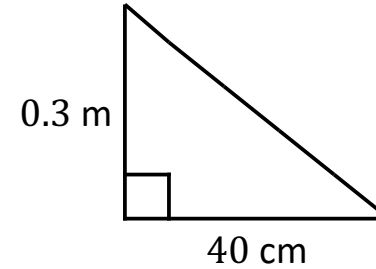
This shape has area  $47.1 \text{ cm}^2$ . Show that it is a rhombus.



## Pythagoras with...

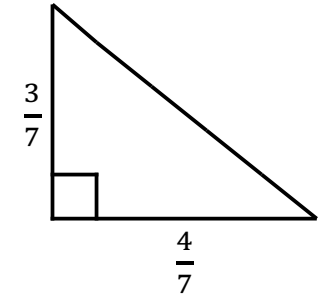
### Unit Conversions

Find the hypotenuse.



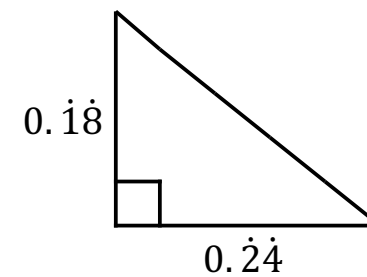
### Fractions

Find the hypotenuse.



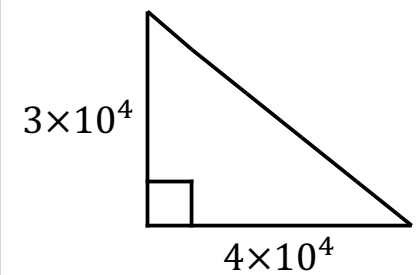
### Recurring Decimals

Find the hypotenuse.



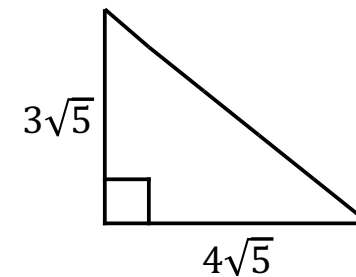
### Standard Form

Find the hypotenuse.



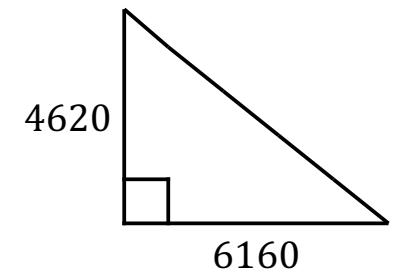
### Surds

Find the hypotenuse.



### Prime Factorisation

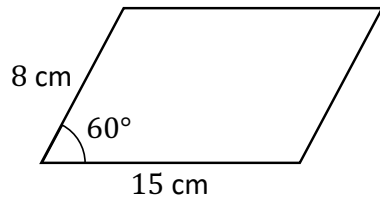
Find the hypotenuse.



## Trigonometry with...

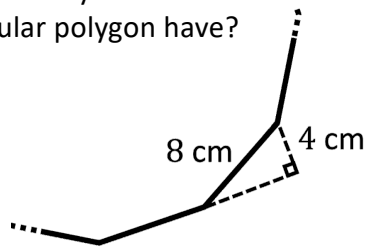
### Area

Find the parallelogram's area.



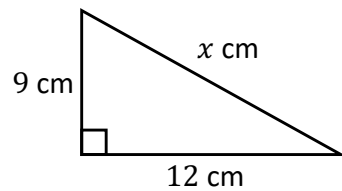
### Angles in Polygons

How many sides does the regular polygon have?



### Pythagoras

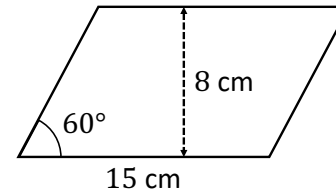
Find  $x$  using two different methods.



## Trigonometry with...

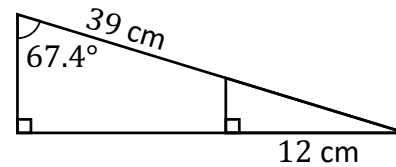
### Perimeter

Find the parallelogram's perimeter.



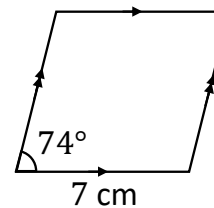
### Similar Shapes

Find the area of the big triangle.



### Quadrilaterals

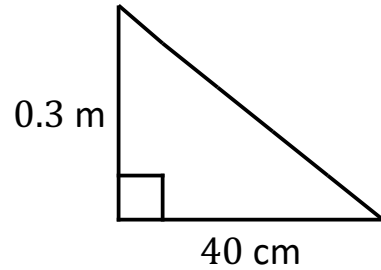
This shape has area  $47.1 \text{ cm}^2$ . Show that it is a rhombus.



## Pythagoras with...

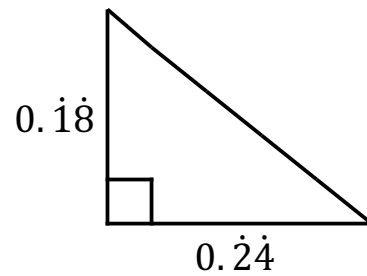
### Unit Conversions

Find the hypotenuse.



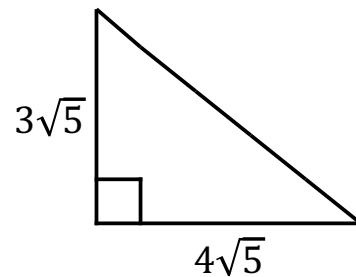
### Recurring Decimals

Find the hypotenuse.



### Surds

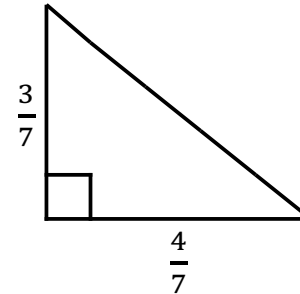
Find the hypotenuse.



## Pythagoras with...

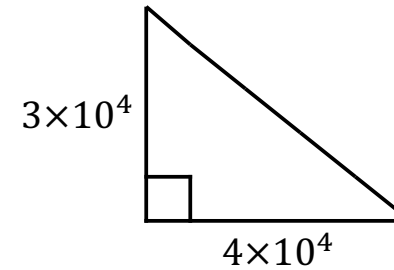
### Fractions

Find the hypotenuse.



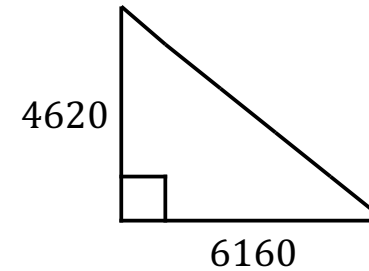
### Standard Form

Find the hypotenuse.



### Prime Factorisation

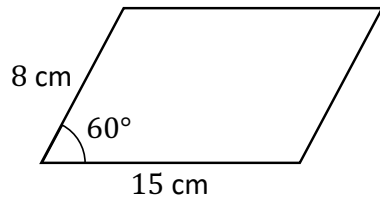
Find the hypotenuse.



## Trigonometry with...

### Area

Find the parallelogram's area.



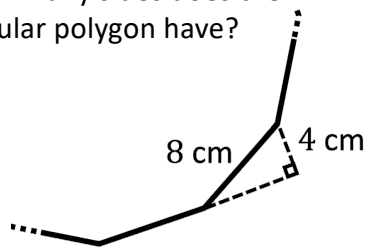
$$103.9 \text{ cm}^2$$

or

$$60\sqrt{3} \text{ cm}^2$$

### Angles in Polygons

How many sides does the regular polygon have?

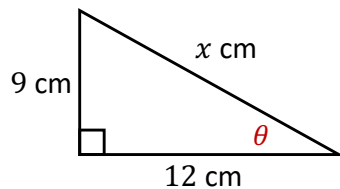


$$\text{Ext. angle} = 30^\circ$$

$$n = \frac{360}{30} = 12$$

### Pythagoras

Find  $x$  using two different methods.



$$\text{e.g. } \theta = \tan^{-1}\left(\frac{9}{12}\right) = 36.9^\circ$$

$$x = \frac{9}{\sin(36.9)} = 15 \text{ cm}$$

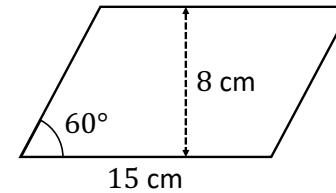
and

$$x = \sqrt{12^2 + 9^2} = 15 \text{ cm}$$

## Trigonometry with...

### Perimeter

Find the parallelogram's perimeter.



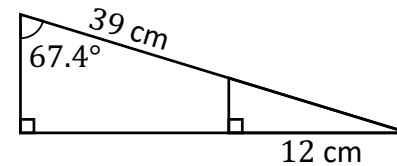
$$48.5 \text{ cm}$$

or

$$\frac{32}{3}\sqrt{3} + 30 \text{ cm}$$

### Similar Shapes

Find the area of the big triangle.

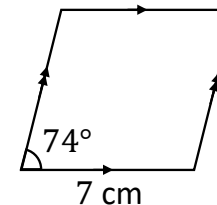


$$\text{s.f.} = 4$$

$$\text{Area} = 480 \text{ cm}^2$$

### Quadrilaterals

This shape has area  $47.1 \text{ cm}^2$ . Show that it is a rhombus.



$$\text{Height} = \frac{47.1}{7} = 6.73 \text{ cm.}$$

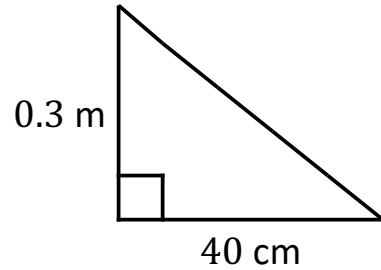
$$\text{Left side} = \frac{6.73}{\sin(74)} = 7 \text{ cm.}$$

All four sides the same length, so it is a rhombus.

## Pythagoras with...

### Unit Conversions

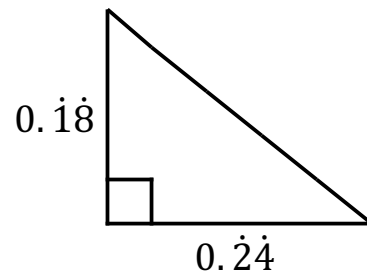
Find the hypotenuse.



$$h = 50 \text{ cm}$$

### Recurring Decimals

Find the hypotenuse.



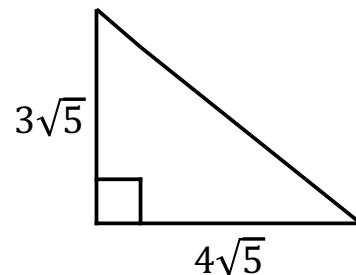
$$0.\dot{1}8 = \frac{18}{99} = \frac{2}{33} \times 3$$

$$0.\dot{2}4 = \frac{24}{99} = \frac{2}{33} \times 4$$

$$h = \frac{2}{33} \times 5 = \frac{10}{33} = 0.\dot{3}\dot{0}$$

### Surds

Find the hypotenuse.

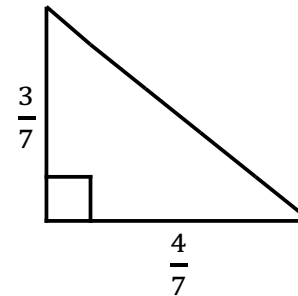


$$h = 5\sqrt{5}$$

## Pythagoras with...

### Fractions

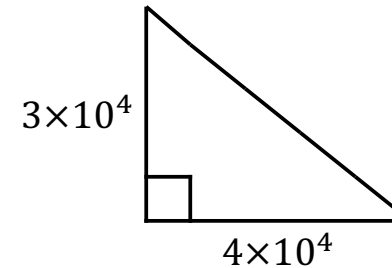
Find the hypotenuse.



$$h = \frac{5}{7} \text{ cm}$$

### Standard Form

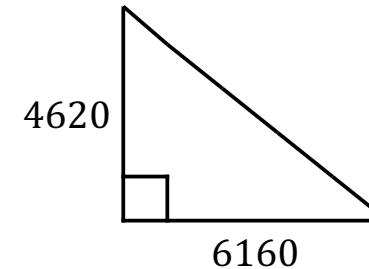
Find the hypotenuse.



$$h = 5 \times 10^4 \text{ cm}$$

### Prime Factorisation

Find the hypotenuse.



$$4620 = 2^2 \times 3 \times 5 \times 7 \times 11$$

$$= 1540 \times 3$$

$$6160 = 2^4 \times 5 \times 7 \times 11$$

$$= 1540 \times 4$$

$$h = 1540 \times 5 = 7700$$