

Pythagoras' Theorem Worksheet 1

**Foundation – Start here if you need some practice with squaring and square-rooting.**

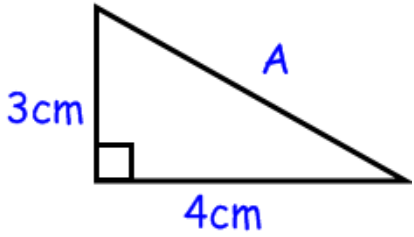
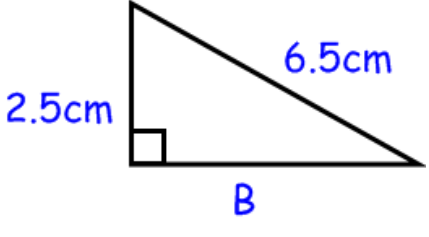
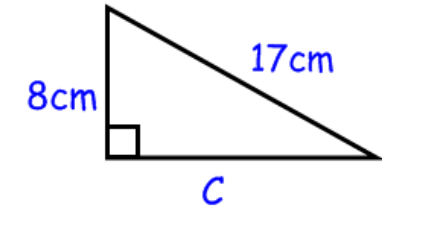
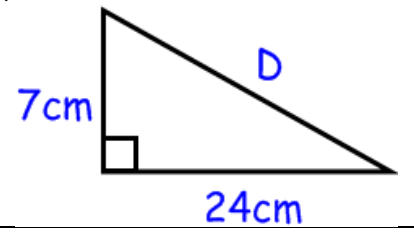
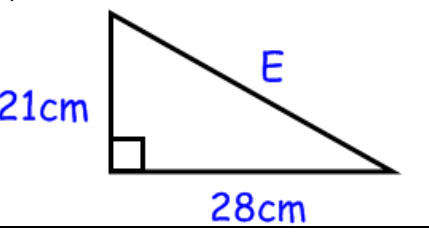
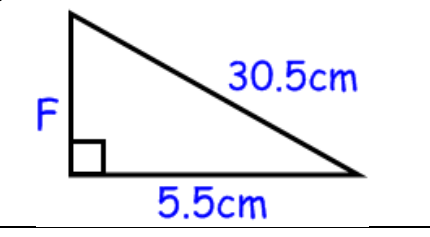
- 1) Calculate the value of:      a)  $14^2$                   b)  $15^2$                   c)  $10^2 + 5^2$               d)  $9^2 - 7^2$               e)  $9^2 + 12^2$
- 2) Calculate the value of:      a)  $\sqrt{100}$                   b)  $\sqrt{144}$                   c)  $\sqrt{169}$                   d)  $\sqrt{3^2 + 4^2}$               e)  $\sqrt{13^2 - 5^2}$

**\*Now you may use a calculator and give your answers correct to 2dp\***

- 3) Calculate the value of:      a)  $17^2$                   b)  $2.7^2$                   c)  $3.8^2$                   d)  $\sqrt{35}$                   e)  $\sqrt{11^2 - 8^2}$

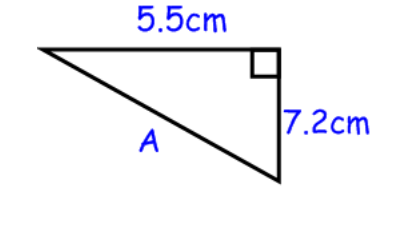
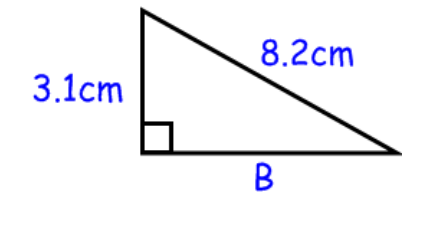
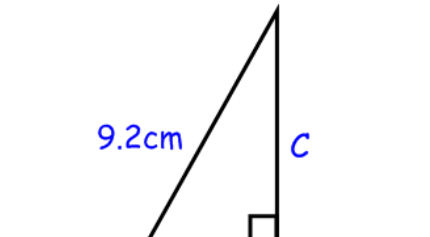
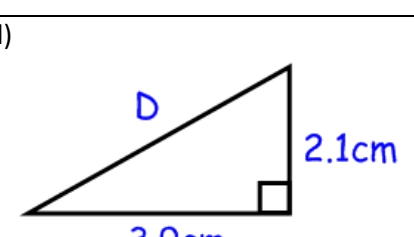
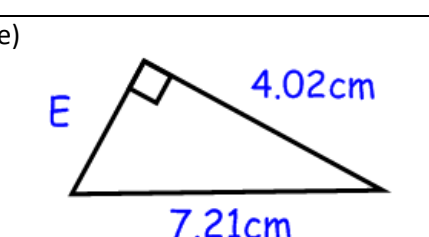
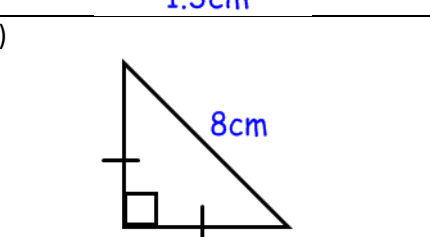
**Take the Stairs – Start here if you want to build up to the top end level of work one step at a time**

- 4) For each of the triangles below, calculate the value of the missing side;

<p>a)</p> 	<p>b)</p> 	<p>c)</p> 
<p>d)</p> 	<p>e)</p> 	<p>f)</p> 

**Top Floor – You can really earn your stripes here – You are also allowed a calculator for these questions**

- 5) Calculate the value of the missing side in the triangles below; Give your answers correct to 2dp

<p>a)</p> 	<p>b)</p> 	<p>c)</p> 
<p>d)</p> 	<p>e)</p> 	<p>f)</p> 

**Extension:** A boat sets sail, heading 12km due East. It then heads 8km North. Calculate the distance from the original position of the boat.

## Answers

### Question 1

a) 196	b) 225	c) 125	d) 32	e) 225
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### Question 2

a) 10	b) 12	c) 13	d) 5	e) 12
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### Question 3

a) 5cm	b) 6cm	c) 15cm
d) 25cm	e) 35cm	f) 30cm

### Question 4

a) 9.06cm	b) 7.59cm	c) 9.11cm
d) 4.43cm	e) 5.99cm	f) 5.66cm

Extension Answer = 14.42km