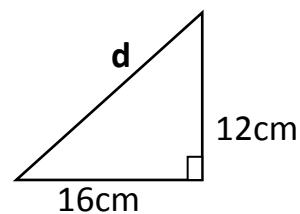
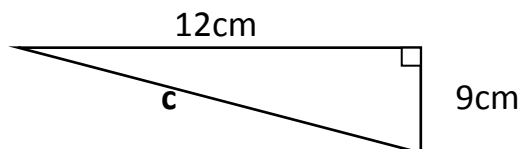
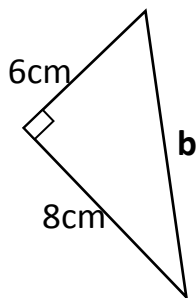
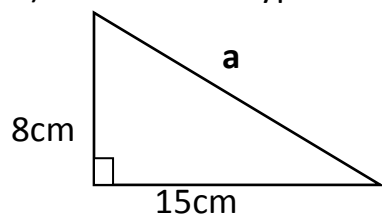
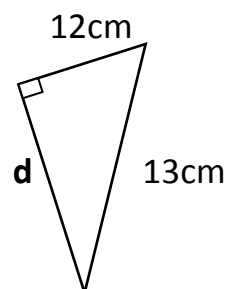
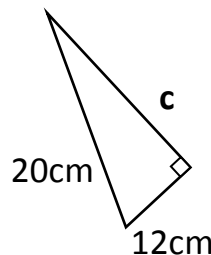
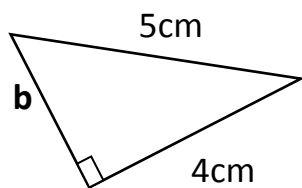
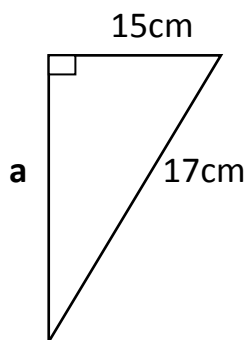


PYTHAGORAS WORKSHEET

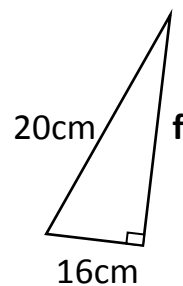
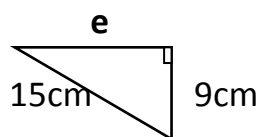
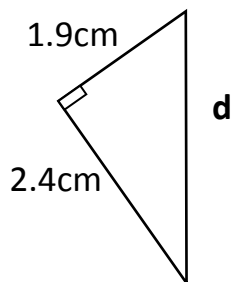
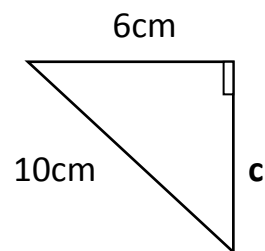
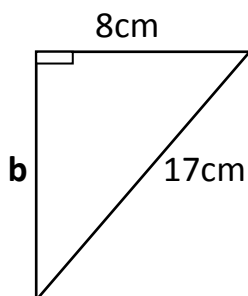
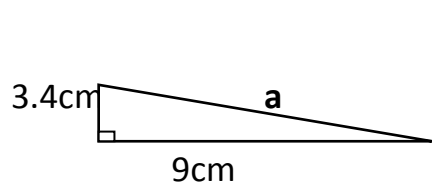
1) Find the hypotenuse of the following triangles.



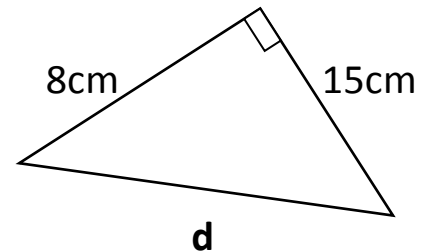
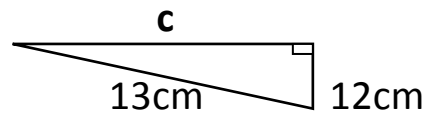
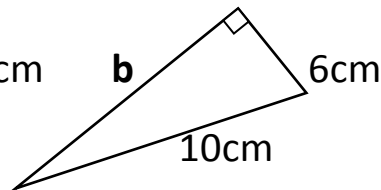
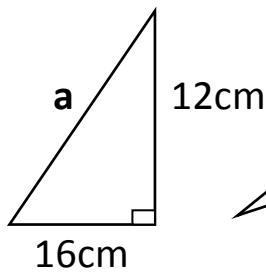
2) Using Pythagoras, find the lengths of the sides labelled with letters.



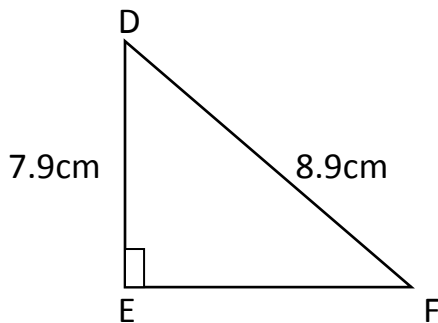
3) Find the missing lengths of the triangles below. If necessary, round answers to 1 decimal place.



- 4) Find the perimeter of the following triangles;

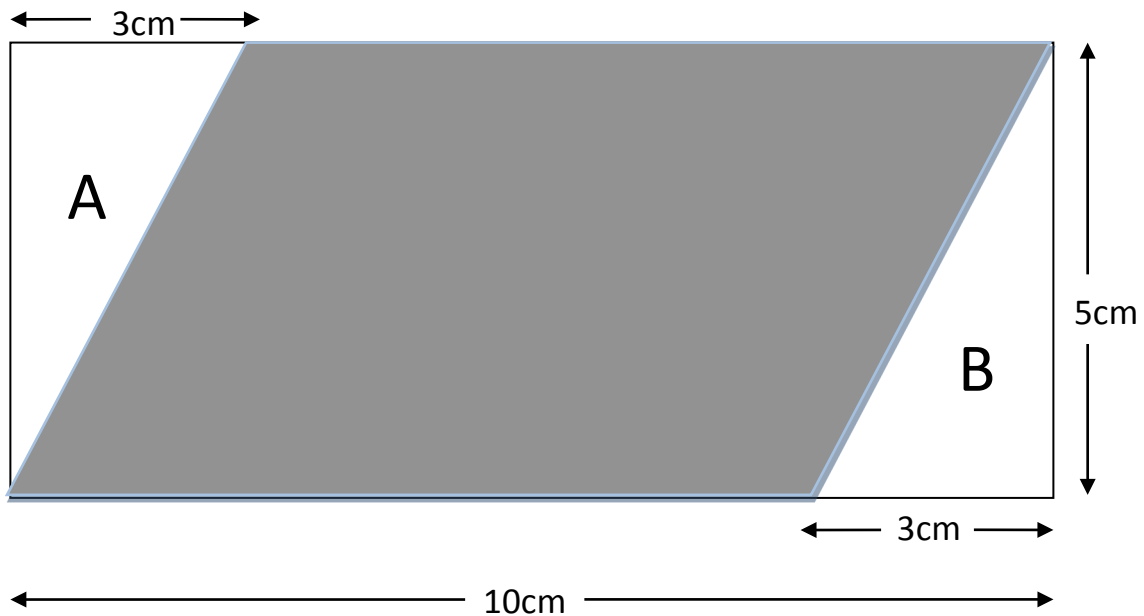


- 5) The triangle DEF is shown below. Find the length of EF to 1 decimal place.

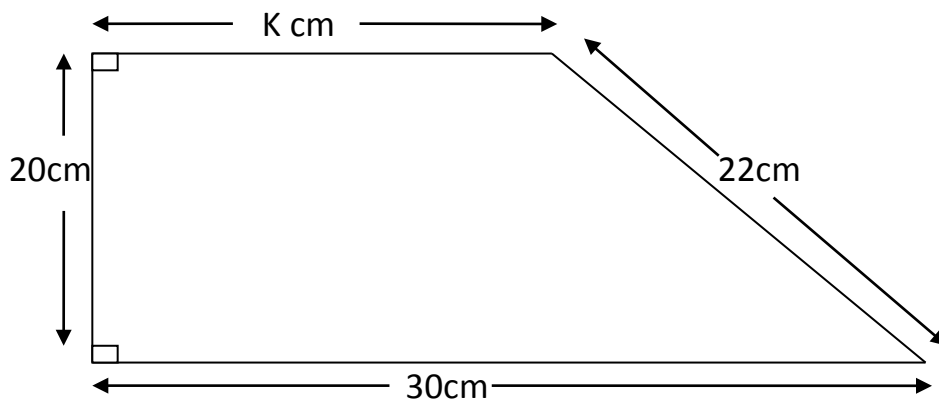


- 6) To wash a window that is 8 metres off the ground, Ben leans a 10 metre ladder against the side of the building. To reach the window, how far from the building should Ben place the base of the ladder?
- 7) A rectangular swimming pool is 21 metres wide and 50 metres long. Calculate the length of the diagonal to 1 decimal place.
- 8) Miss Barker is teaching a 5th grade class. She is standing 12 metres in front of Jim. Francisco is sitting 5 metres to Jim's right. How far apart are Miss Barker and Francisco?
- 9) A triangle has sides with lengths of 10 metres, 16 metres and 20 metres. Is it a right angled triangle? Explain your reasoning.
- 10) a) One side of a right angled triangle is 10cm. The other two are both of length x . Calculate x to 2 decimal places.
b) Find the perimeter of the triangle in part a)
- 11) Find the length of the diagonal of a square of side 4cm to 2 decimal places.

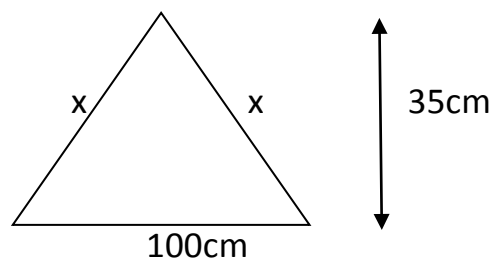
- 12) The diagram below shows a shaded parallelogram drawn inside a rectangle. Using Pythagoras, find the hypotenuse of triangle A and the hypotenuse of triangle B to 1 decimal place.



- 13) Here is a trapezium, use Pythagoras' Theorem to find the value of k to 1 decimal place.



- 14) The following triangle is NOT a right angled triangle and so you cannot apply Pythagoras' theorem directly. Find the length of x to 2 d.p.



Answers:

- 1) a = 17cm b = 10cm c = 15cm d = 20cm
- 2) a = 8cm b = 3cm c = 16cm d = 5cm
- 3) a = 9.6cm b = 15cm c = 8cm d = 3.1cm e = 12cm f = 12cm
- 4) a = 48cm b = 24cm c = 30cm d = 40cm
- 5) EF = 16.8cm
- 6) 6 metres
- 7) 54.2 metres
- 8) 13 metres
- 9) No. Using Pythagoras, $a^2 + b^2 \neq c^2$ (a squared + b squared does not equal hypotenuse squared)
- 10) a) x = 7.07cm b) perimeter = 24.14 cm
- 11) 5.65 cm
- 12) A = 5.8cm B = 5.8cm
- 13) k = 20.8cm
- 14) x = 61.03 cm