

Pythagoras' Theorem Quiz

A self marking exercise on the application of Pythagoras' Theorem.

Level 1

Level 2

Level 3

Level 4

Level 5

Exam-Style

Description

Help

More on Pythagoras

Here are some questions which can be answered using Pythagoras' Theorem. You can earn a trophy if you get at least 14 questions correct. Each time you finish a question click the 'Check' button lower down the page to see if you got it right!

Don't forget to include the units in your answers after question one!

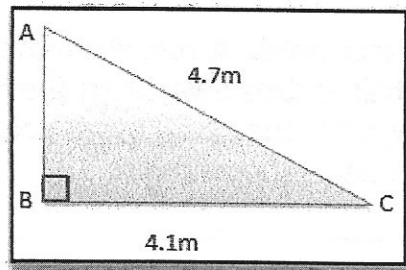
Show work on all problems #2-18. Round answers to the tenths place.

1. What is the name for the longest side of a right angled triangle?

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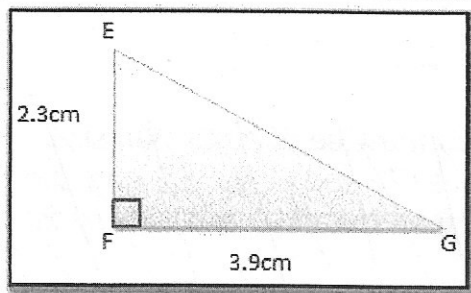
2. What is the length of the longest side of a right angled triangle if the two shorter sides are 5cm and 12cm?

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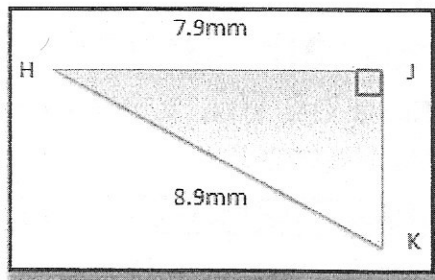
3. Find the length of AB to 1 decimal place.

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4. Find the length of EG to 1 decimal place.

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5. Find the length of JK to 1 decimal place.

6. A rectangular swimming pool is 29m wide and 50m long. Calculate the length of a diagonal in metres to 1 decimal place.

7. A ladder is 5m long. How far from the base of a wall should it be placed if it is to reach 4m up the wall? Give your answer in metres correct to 1 decimal place

8. A tent guy line supports one of the upright tent poles. It runs from the top of the pole to a peg in the ground two and a half metres away from the base of the pole. If the guy line is 411cm long, how tall is the upright tent pole? Give your answer in centimetres correct to the nearest centimetre.

9. How long is the diagonal of an A4 size sheet of paper? The dimensions of A4 paper are 210 by 297 millimetres (8.3 inches \times 11.7 inches). Give your answer in cm to one decimal place.

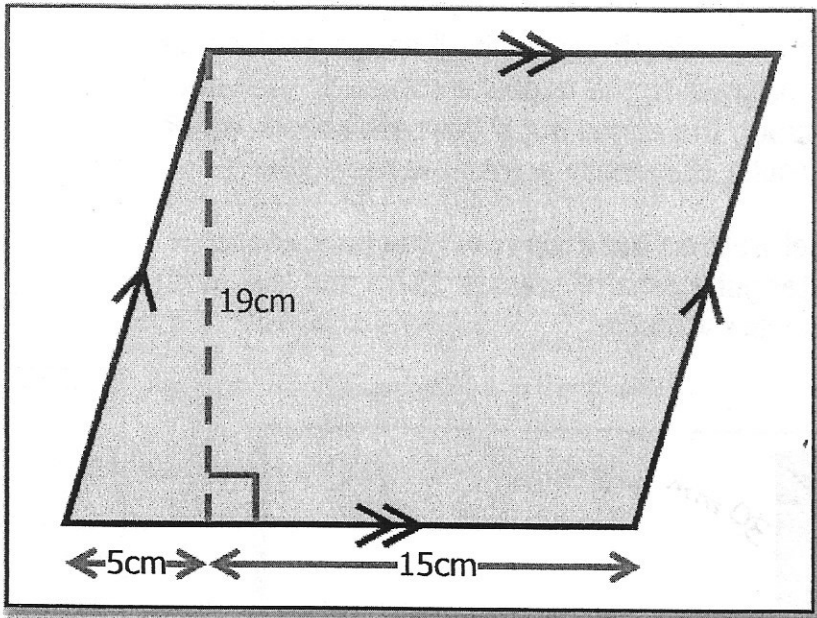
10. For international matches football pitches must be of regulation size. The goal lines must be between 64 and 75 metres (70 and 80 yards) long and the touchlines must be between 100 and 110 metres (110 and 120 yards).

What is the difference between the length of the diagonal of the largest acceptable pitch and the length of the diagonal of the smallest acceptable pitch? Give your answer in metres to the nearest metre.

SKIP

11. Find the length of a side of a rhombus whose diagonals are of length 13km and 16km. Give your answer in kilometers correct to one decimal place.

SKIP

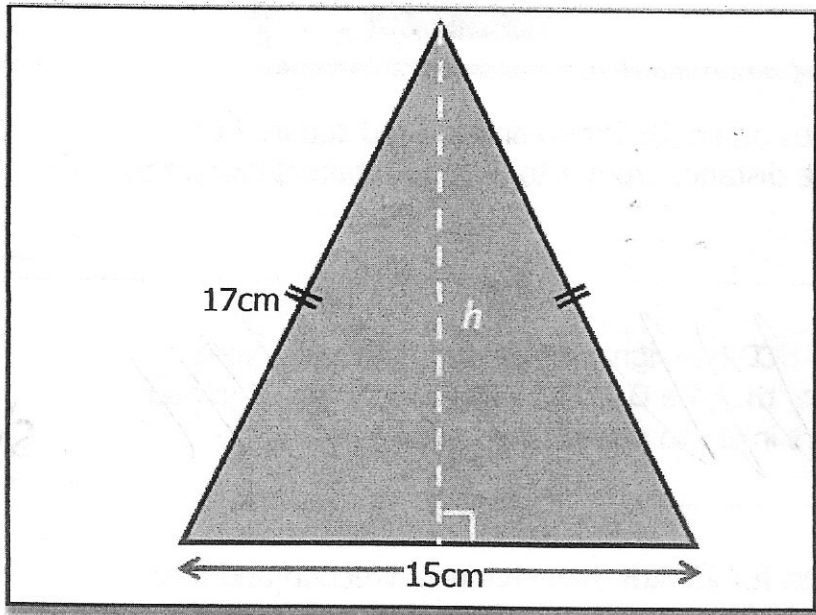


12. Find the perimeter of this parallelogram to one decimal place.

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13. The length of the diagonal of a square is 85m. How long are the sides of the square? Give your answer correct to one decimal place.

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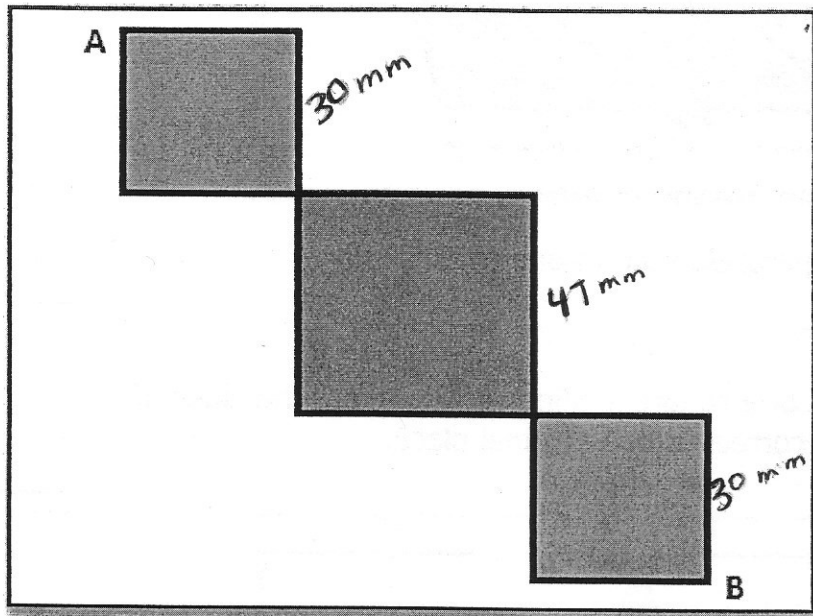


14. Find the height (h) of this isosceles triangle to one decimal place.

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15. The sign says 'Keep off the grass'. Each day Michael has to get from one corner of the rectangular area of grass to the opposite corner. If the park keeper is looking he will walk along the edges but if the park keeper is not looking he will take the direct route, diagonally across the rectangle.

How much further does Michael walk on the days when the park keeper is looking? The length of the rectangular area of grass is 131m and the width is 98m. Give your answer to the nearest metre.



16. The blue squares have sides of length 30mm and the red square has sides of length 47mm. Find the distance from A to B in centimetres correct to one decimal place.

17. An irregular quadrilateral ABCD has right angles at the opposite vertices A and C. Calculate the length of the side DA if $AB=39.4\text{cm}$, $BC=41.3\text{cm}$ and $CD=41.8\text{cm}$. Give your answers in cm to one decimal place.

skip

18. An aeroplane flies due north for 254km then changes direction and flies east for 357km. How far is it now in a straight line from its starting position. Give your answer to the nearest kilometre.