



Pythagoras

Warm up

Use your calculator to find the following values. Round your answer to 1 decimal place if it is a decimal.

1. $18^2 =$

2. $13^2 + 15^2 =$

3. $21^2 - 17^2 =$

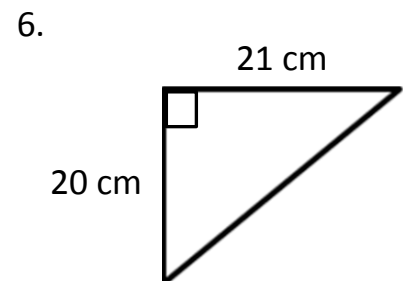
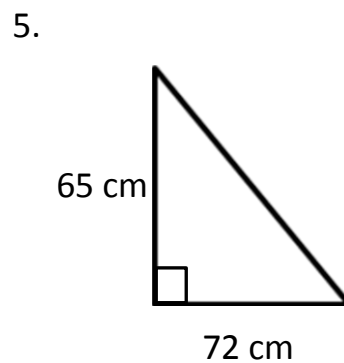
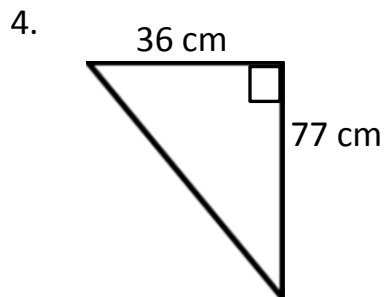
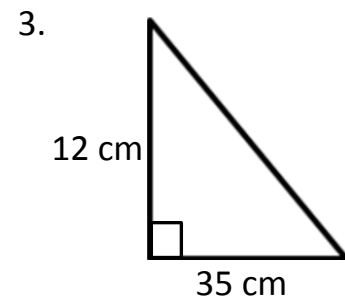
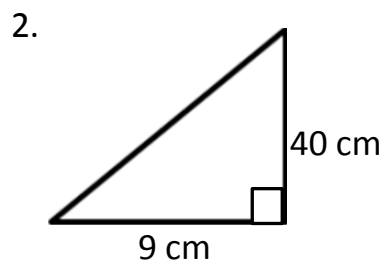
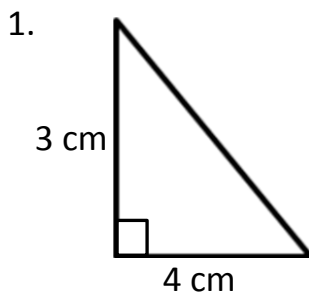
4. $\sqrt{18} =$

5. $\sqrt{18 - 5} =$

6. $\sqrt{21^2 - 16^2} =$

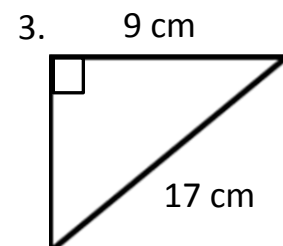
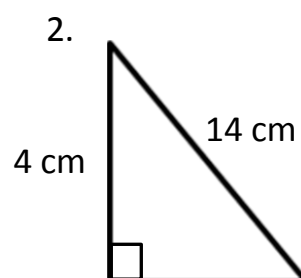
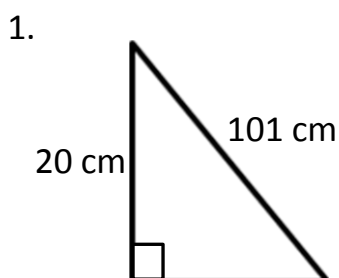
Stage 1

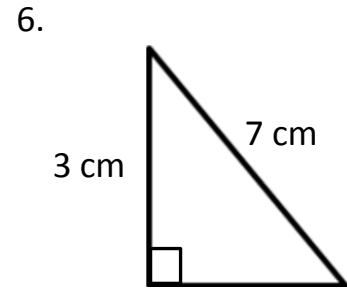
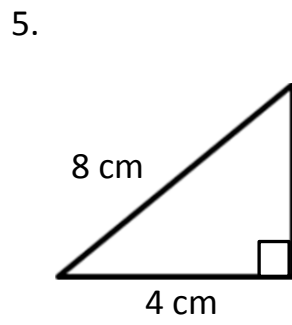
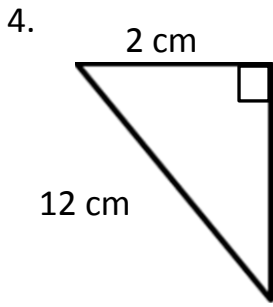
Find the length of the unknown side.



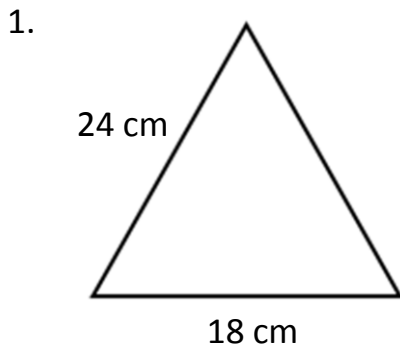
Stage 2

Find the length of the unknown side. Round your answer to 1 decimal place if it is a decimal.

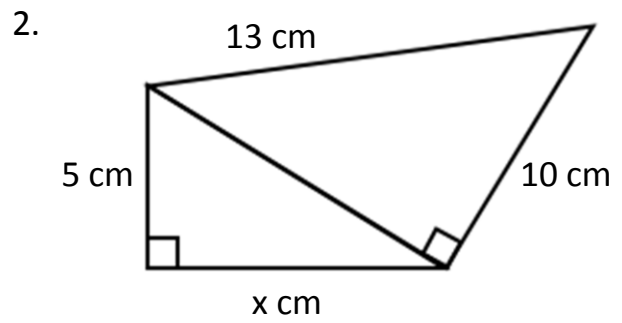




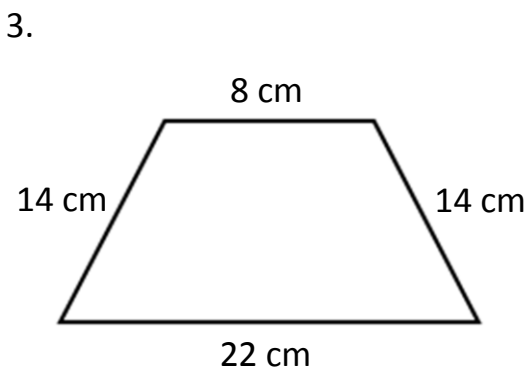
Stage 3



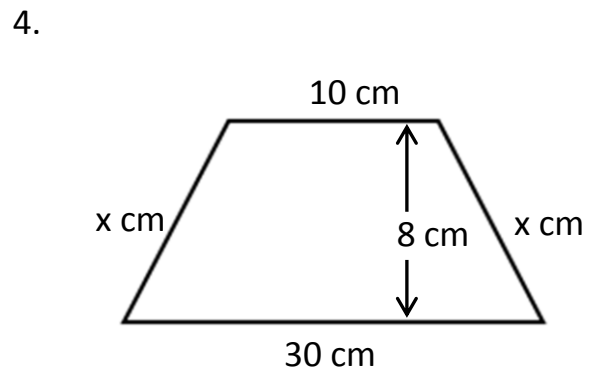
Find the height of the equilateral triangle.



Find length x .



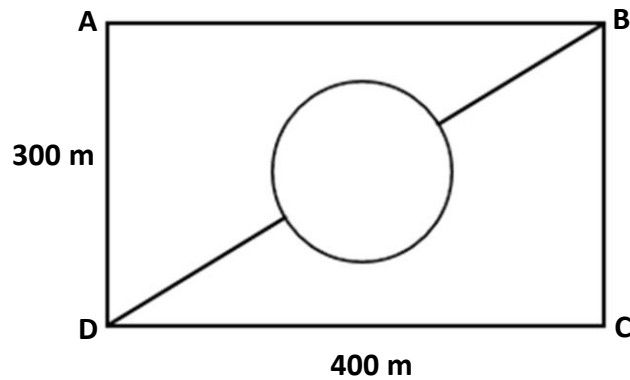
Find the height of the trapezium.



Find the length of side x .

Stage 4

1. The rectangle below represents a park.

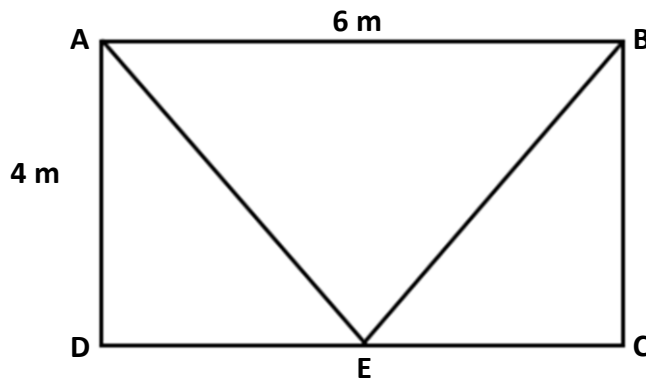


The lines show all the paths in the park.

The circular path is in the centre of a rectangle and has a diameter of 120 m.

Calculate the shortest distance from D to B across the park, using only the paths shown.

2. A metal frame is made of six metal rods and is shown below.



Point E is half way between C and D.

Calculate the total length of metal needed to make the frame.

3. A triangle has side lengths 11.2 cm, 15.7 cm and 19.8 cm.
Is this a right angled triangle?
Show how you decide.