1) Find the missing length in the triangle pictured below

![Triangle 1](image1)

2) Find the missing length in the triangle pictured below

![Triangle 2](image2)

3) A right-angled triangle has two short sides of length 12 cm and 16 cm. Find the length of the hypotenuse.
4) A right-angled triangle has a hypotenuse of length 117 cm and one short side of length 45 cm. Find the length of the other short side.

5) Find the missing length in the triangle pictured below, giving your answer to 3 significant figures

6) Find the missing length in the triangle pictured below, giving your answer to 3 significant figures

7) A right-angled triangle has short sides of length 6 cm and 8 cm. Find the length of the hypotenuse, giving your answer to 3 significant figures.

8) A right-angled triangle has a hypotenuse of length 18 cm and a short side of length 11 cm. Find the length of the other short side, giving your answer to 3 significant figures.
9) The base of a ladder is 7 metres from a wall. The height of the wall is 9 metres.
What is the minimum height the ladder must be to reach the top of the wall? (give your answer to 3 significant figures)

10) Find the distance between the coordinates \((-2, 1)\) and \((4, -5)\), giving your answer to 3 significant figures

11) Find the length of the line segment shown below, giving your answer to 3 significant figures

12) The diagram shows a field with length 600 metres and width 400 metres.
Find the diagonal distance across the field.
Give your answer to the nearest metre.
Solutions for the assessment Pythagoras

1) \( x = 100 \text{ cm} \)

2) \( x = 120 \text{ cm} \)

3) \( x = 20 \text{ cm} \)

4) \( x = 108 \text{ cm} \)

5) \( x = 15.6 \text{ cm} \)

6) \( x = 11.0 \text{ cm} \)

7) \( x = 10 \text{ cm} \)

8) \( x = 14.2 \text{ cm} \)

9) Height = 11.4 cm

Distance = \( \sqrt{6^2 + 6^2} \)

Distance = 8.49

10) \( \text{Distance} = \sqrt{72} \)

11) Length = \( \sqrt{3^2 + 4^2} \)

Length = 5

12) Diagonal distance = 721 m