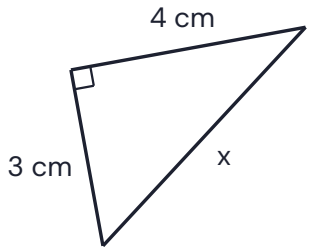
Pythagorean theorem: find the missing side

Find x. The hypotenuse is across from the square corner: add the squares to find it, subtract to find a leg.

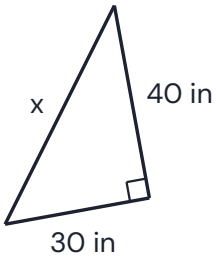
Name _____ Date _____

1.



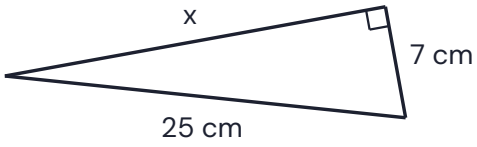
x = _____

2.



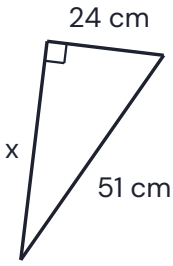
x = _____

3.



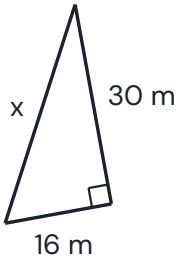
x = _____

4.



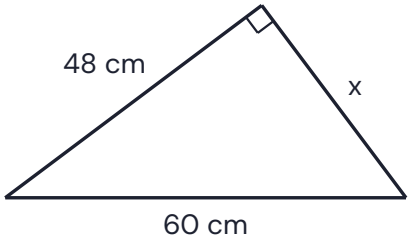
x = _____

5.



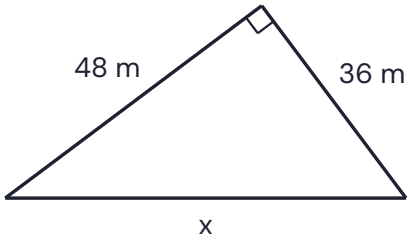
x = _____

6.



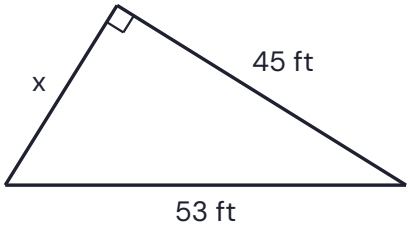
x = _____

7.



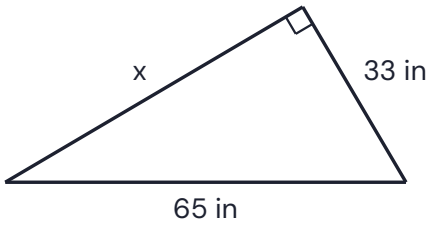
x = _____

8.



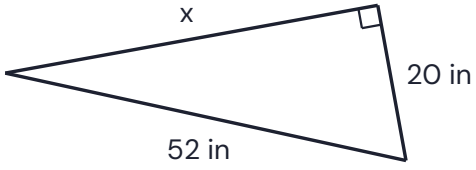
x = _____

9.



x = _____

10.



x = _____

Pythagorean theorem: find the missing side: answer key

Each answer in colour, with the working before it.

1. $3^2 + 4^2 = x^2$
   $9 + 16 = 25$
   $x = \sqrt{25} =$ **5 cm**

2. $40^2 + 30^2 = x^2$
   $1600 + 900 = 2500$
   $x = \sqrt{2500} =$ **50 in**

3. $x^2 + 7^2 = 25^2$
   $x^2 = 625 - 49 = 576$
   $x = \sqrt{576} =$ **24 cm**

4. $x^2 + 24^2 = 51^2$
   $x^2 = 2601 - 576 = 2025$
   $x = \sqrt{2025} =$ **45 cm**

5. $30^2 + 16^2 = x^2$
   $900 + 256 = 1156$
   $x = \sqrt{1156} =$ **34 m**

6. $x^2 + 48^2 = 60^2$
   $x^2 = 3600 - 2304 = 1296$
   $x = \sqrt{1296} =$ **36 cm**

7. $48^2 + 36^2 = x^2$
   $2304 + 1296 = 3600$
   $x = \sqrt{3600} =$ **60 m**

8. $x^2 + 45^2 = 53^2$
   $x^2 = 2809 - 2025 = 784$
   $x = \sqrt{784} =$ **28 ft**

9. $x^2 + 33^2 = 65^2$
   $x^2 = 4225 - 1089 = 3136$
   $x = \sqrt{3136} =$ **56 in**

10. $x^2 + 20^2 = 52^2$
    $x^2 = 2704 - 400 = 2304$
    $x = \sqrt{2304} =$ **48 in**