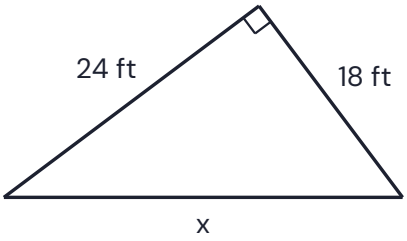
Pythagorean theorem: find the hypotenuse

Find x, the hypotenuse: square both legs, add, then take the square root.

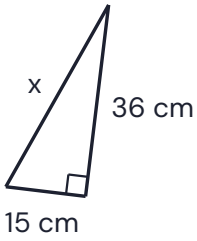
Name _____ Date _____

1.



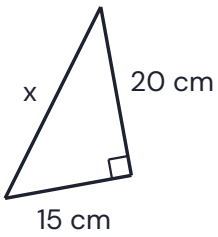
x = _____

2.



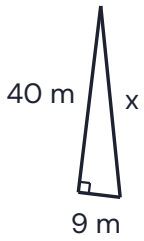
x = _____

3.



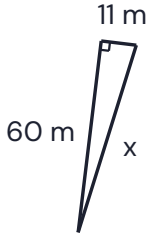
x = _____

4.



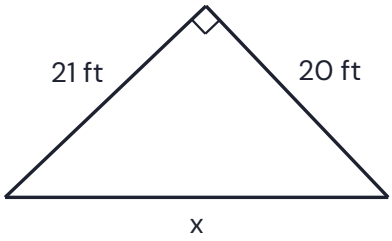
x = _____

5.



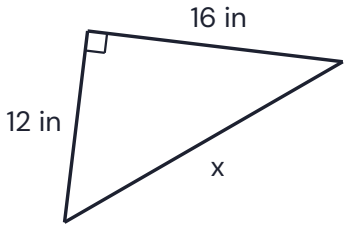
x = _____

6.



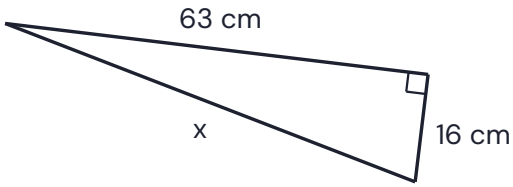
x = _____

7.



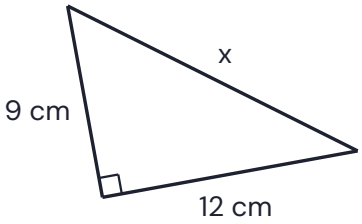
x = _____

8.



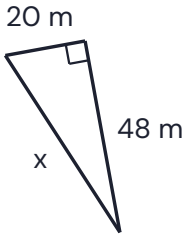
x = _____

9.



x = _____

10.



x = _____

Pythagorean theorem: find the hypotenuse: answer key

Each answer in colour, with the working before it.

1. $24^2 + 18^2 = x^2$
   $576 + 324 = 900$
   $x = \sqrt{900} =$ **30 ft**

2. $15^2 + 36^2 = x^2$
   $225 + 1296 = 1521$
   $x = \sqrt{1521} =$ **39 cm**

3. $20^2 + 15^2 = x^2$
   $400 + 225 = 625$
   $x = \sqrt{625} =$ **25 cm**

4. $9^2 + 40^2 = x^2$
   $81 + 1600 = 1681$
   $x = \sqrt{1681} =$ **41 m**

5. $11^2 + 60^2 = x^2$
   $121 + 3600 = 3721$
   $x = \sqrt{3721} =$ **61 m**

6. $21^2 + 20^2 = x^2$
   $441 + 400 = 841$
   $x = \sqrt{841} =$ **29 ft**

7. $16^2 + 12^2 = x^2$
   $256 + 144 = 400$
   $x = \sqrt{400} =$ **20 in**

8. $63^2 + 16^2 = x^2$
   $3969 + 256 = 4225$
   $x = \sqrt{4225} =$ **65 cm**

9. $9^2 + 12^2 = x^2$
   $81 + 144 = 225$
   $x = \sqrt{225} =$ **15 cm**

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