

Measurement and Geometry 3.3

Introduction to Pythagorean Theorem

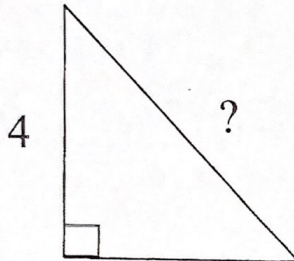
Name _____

Date _____

Period _____

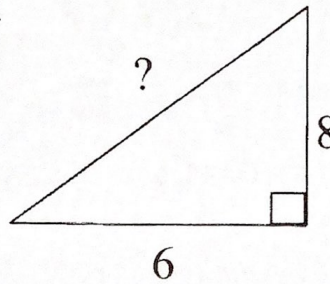
Find the missing side lengths.

1.



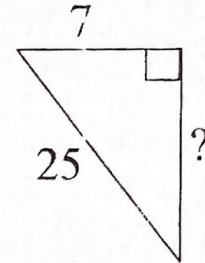
$$\begin{aligned} 4 \times 4 &= 16 \\ 3 \times 3 &= 9 \\ 25 \end{aligned}$$

2.



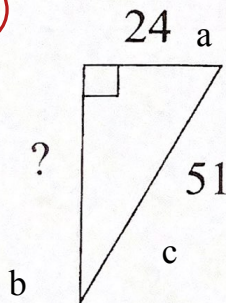
$$\begin{aligned} 6 \times 6 &= 36 \\ 8 \times 8 &= 64 \\ 100 \end{aligned}$$

3.



side = $\frac{5 = x}{}$

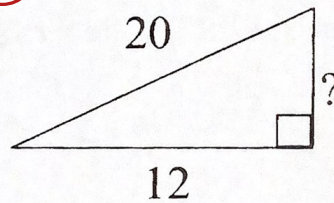
4.



$$\begin{aligned} 24^2 + b^2 &= 51^2 \\ 576 + b^2 &= 2601 \\ 576 &- \quad 576 \\ 2025 \end{aligned}$$

side = $\frac{10 = x}{}$

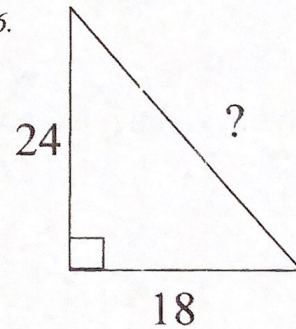
5.



$$\begin{aligned} 12^2 + b^2 &= 20^2 \\ 144 + b^2 &= 400 \\ 256 \end{aligned}$$

side = $\frac{x = 24}{}$

6.



$$\begin{aligned} 24 \times 24 &= 576 \\ 18 \times 18 &= 324 \\ 900 \end{aligned}$$

side = $\frac{x = 45}{}$

side = $\frac{x = 16}{}$

side = $\frac{x = 30}{}$

Draw a picture and find the missing side.

7. A right triangle has a short side of 15 and a hypotenuse of 17.
What is the missing side?

side = _____

8. A right triangle has a short side of 15 and a hypotenuse of 39.
What is the missing side?

side = _____

9. A right triangle has a short side of 9 and a short side of 12.
What is the missing side?

side = _____

10. A right triangle has a short side of 21 and a hypotenuse of 75.
What is the missing side?

side = _____

11. A right triangle has a short side of 30 and a hypotenuse of 34.
What is the missing side?

side = _____