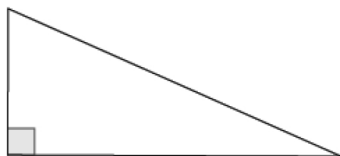


Name \_\_\_\_\_

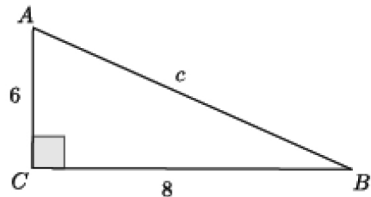
Date \_\_\_\_\_

## Informal Proof of the Pythagorean Theorem

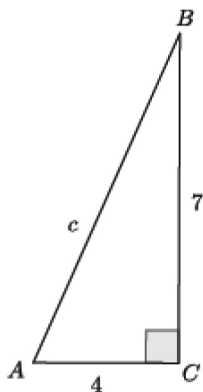
1. Label the sides of the right triangle with leg, leg, and hypotenuse.



2. Determine the length of  $c$  in the triangle shown.

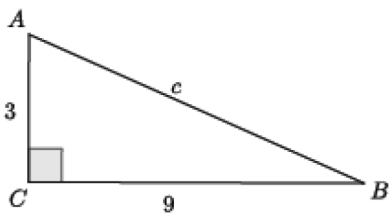


3. Determine the length of  $c$  in the triangle shown.

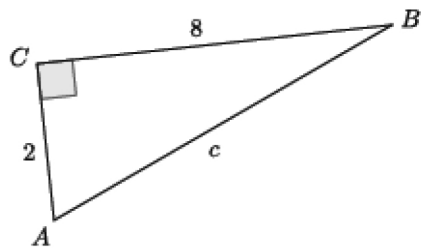


For each of the problems below, determine the length of the hypotenuse of the right triangle shown. Note: Figures not drawn to scale.

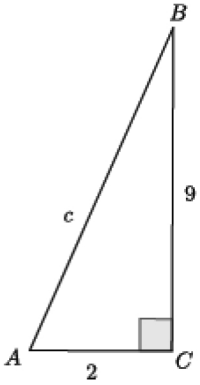
1.



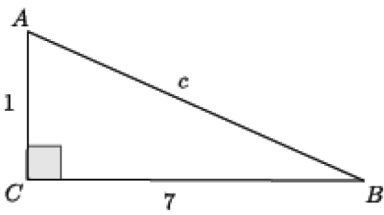
2.



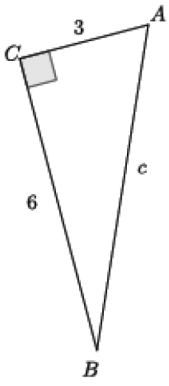
3.



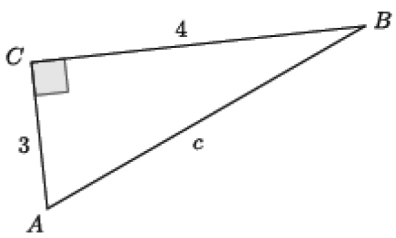
4.



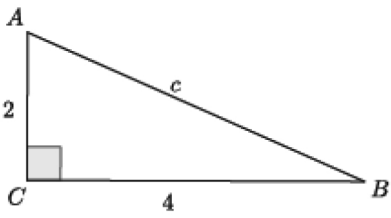
5.

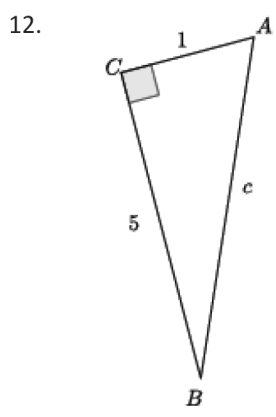
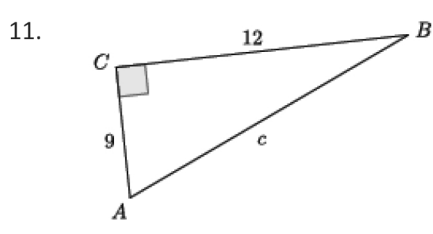
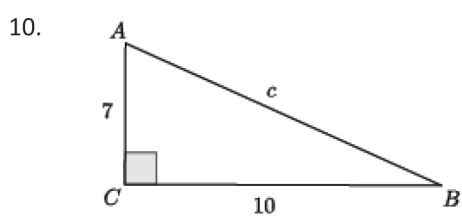
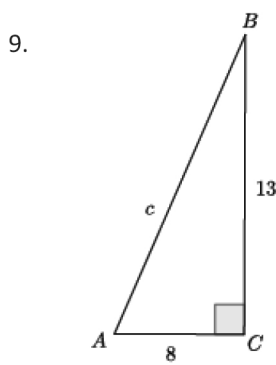
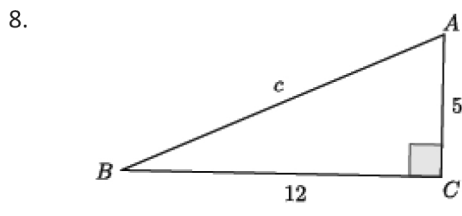


6.

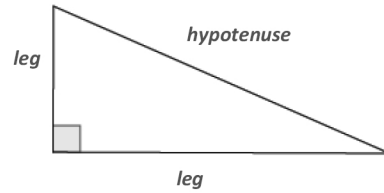


7.

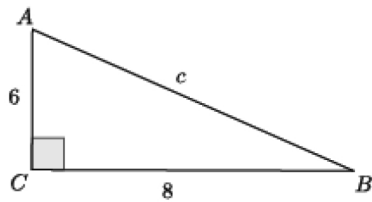




1. Label the sides of the right triangle with leg, leg, and hypotenuse.

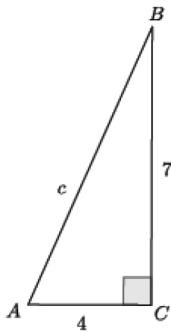


2. Determine the length of  $c$  in the triangle shown.



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 6^2 + 8^2 &= c^2 \\ 36 + 64 &= c^2 \\ 100 &= c^2 \\ 10 &= c \end{aligned}$$

3. Determine the length of  $c$  in the triangle shown.

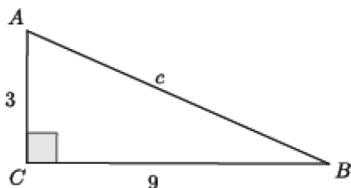


$$\begin{aligned} a^2 + b^2 &= c^2 \\ 4^2 + 7^2 &= c^2 \\ 16 + 49 &= c^2 \\ 65 &= c^2 \end{aligned}$$

Students practice using the Pythagorean theorem to find the length of the hypotenuse of a right triangle.

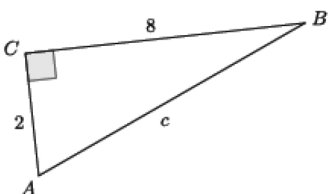
For each of the problems below, determine the length of the hypotenuse of the right triangle shown. Note: Figures not drawn to scale.

1.



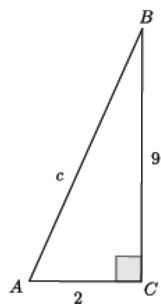
$$\begin{aligned}a^2 + b^2 &= c^2 \\3^2 + 9^2 &= c^2 \\9 + 81 &= c^2 \\90 &= c^2\end{aligned}$$

2.



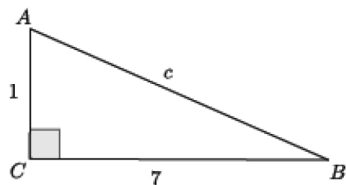
$$\begin{aligned}a^2 + b^2 &= c^2 \\8^2 + 2^2 &= c^2 \\64 + 4 &= c^2 \\68 &= c^2\end{aligned}$$

3.



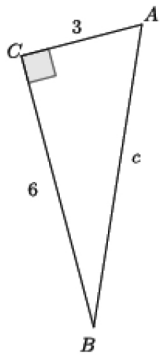
$$\begin{aligned}a^2 + b^2 &= c^2 \\9^2 + 2^2 &= c^2 \\81 + 4 &= c^2 \\85 &= c^2\end{aligned}$$

4.



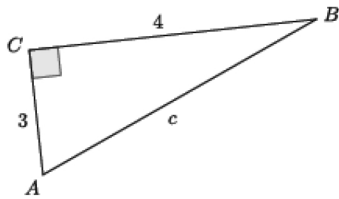
$$\begin{aligned}a^2 + b^2 &= c^2 \\7^2 + 1^2 &= c^2 \\49 + 1 &= c^2 \\50 &= c^2\end{aligned}$$

5.



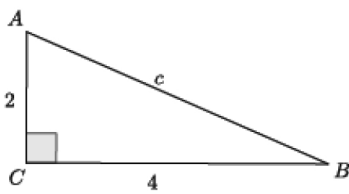
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 6^2 + 3^2 &= c^2 \\ 36 + 9 &= c^2 \\ 45 &= c^2 \end{aligned}$$

6.



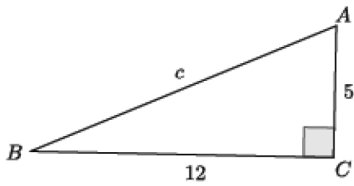
$$\begin{aligned} a^2 + b^2 &= c^2 \\ &= c^2 \\ 4^2 + 3^2 &= c^2 \\ &= c^2 \\ 16 + 9 &= c^2 \\ 25 &= c^2 \\ 5 &= c \end{aligned}$$

7.



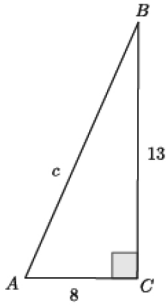
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 4^2 + 2^2 &= c^2 \\ 16 + 4 &= c^2 \\ 20 &= c^2 \end{aligned}$$

8.



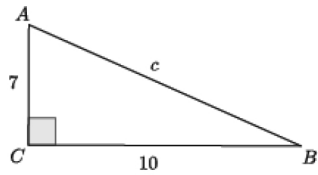
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 12^2 + 5^2 &= c^2 \\ 144 + 25 &= c^2 \\ 169 &= c^2 \\ 13 &= c \end{aligned}$$

9.



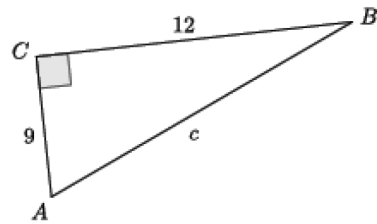
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 13^2 + 8^2 &= c^2 \\ 169 + 64 &= c^2 \\ 233 &= c^2 \end{aligned}$$

10.



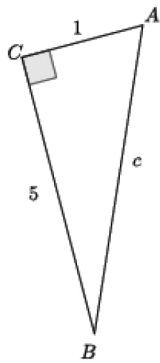
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 10^2 + 7^2 &= c^2 \\ 100 + 49 &= c^2 \\ 149 &= c^2 \end{aligned}$$

11.



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 12^2 + 9^2 &= c^2 \\ 144 + 81 &= c^2 \\ 225 &= c^2 \\ 15 &= c \end{aligned}$$

12.



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 5^2 + 1^2 &= c^2 \\ 25 + 1 &= c^2 \\ 26 &= c^2 \end{aligned}$$