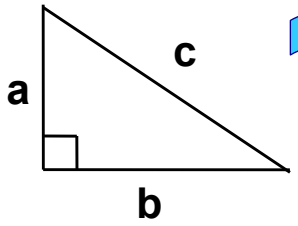
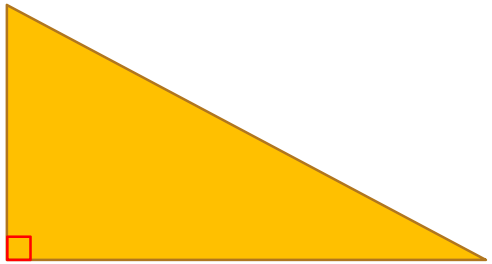
The 7.3 Pythagorean Theorem



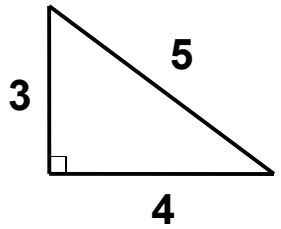
Today's Learning Goals:

- **Provide geometric proof of the Pythagorean Theorem.**
- **Use the Pythagorean Theorem to find missing side lengths of right triangles.**
- **Solve real-life problems.**

Parts of a Right Triangle

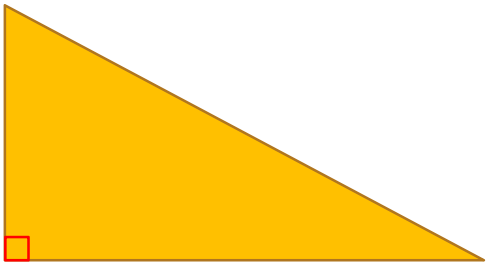


About 2,500 years ago, a Greek mathematician named Pythagorus discovered a special relationship between the sides of right triangles.



Pythagorus realized that if you have a right triangle, and you square the lengths of the two sides that make up the right angle, and add them together, you get the same number you would get by squaring the other side.

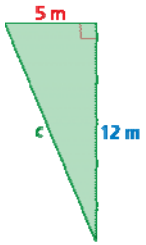
Pythagorean Theorem



Pythagorean Theorem

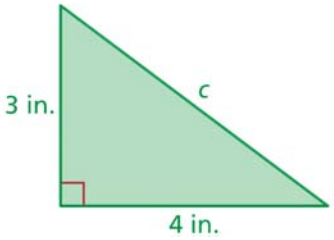
Find the length of the hypotenuse of the triangle.

1)



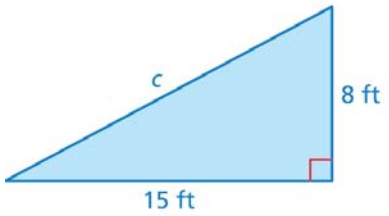
Pythagorean Theorem

2) Find the length of the hypotenuse of the triangle.



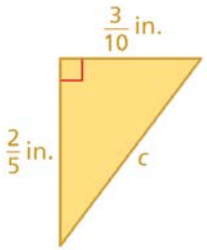
On Your Own

3) Find the length of the hypotenuse of the triangle.



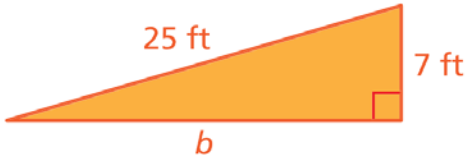
On Your Own

4) Find the length of the hypotenuse of the triangle.



Pythagorean Theorem

5) Find the missing length of the triangle.



Pythagorean Theorem

Find the missing length of the triangle.

6)

8) You and your cousin are planning to go to an amusement park. You live 36 miles south of the amusement park and 15 miles west of your cousin. How far away from the amusement park does your cousin live?