Lesson 13: Proof of the Pythagorean Theorem

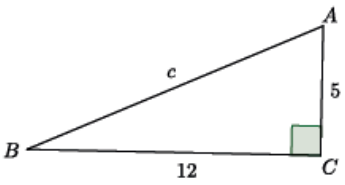
Classwork

Exercises

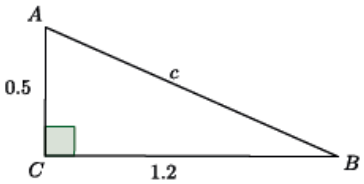
Use the Pythagorean theorem to determine the unknown length of the right triangle.

1. Determine the length of side c in each of the triangles below.

a.

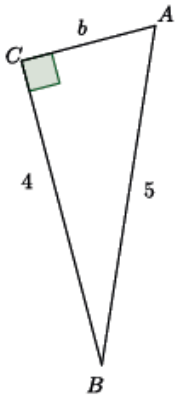


b.

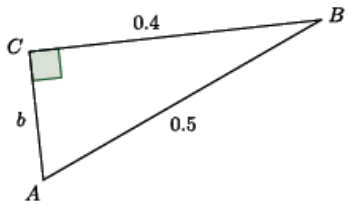


2. Determine the length of side b in each of the triangles below.

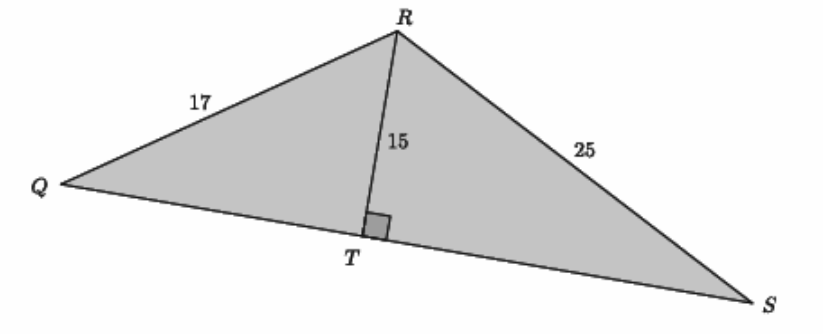
a.



b.



3. Determine the length of $\overline{QS}$. (Hint: Use the Pythagorean theorem twice.)

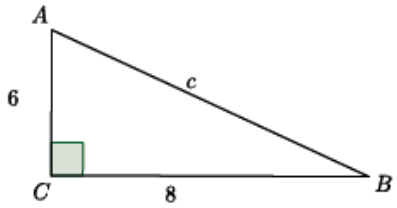


Problem Set

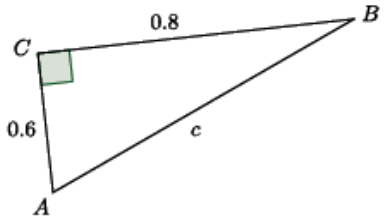
Use the Pythagorean theorem to determine the unknown length of the right triangle.

1. Determine the length of side c in each of the triangles below.

a.

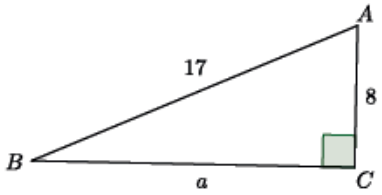


b.

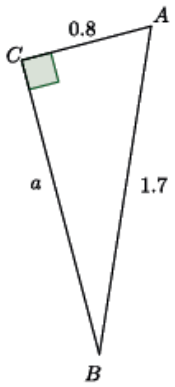


2. Determine the length of side a in each of the triangles below.

a.

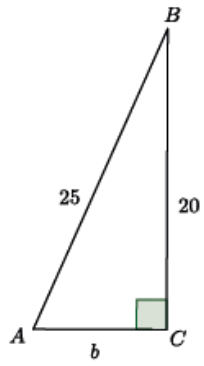


b.

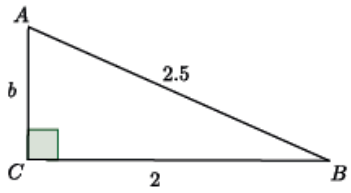


3. Determine the length of side b in each of the triangles below.

a.

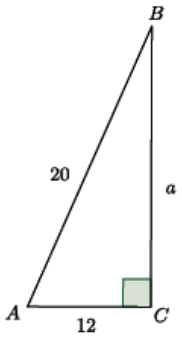


b.

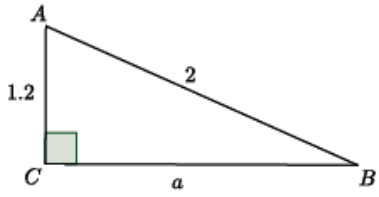


4. Determine the length of side a in each of the triangles below.

a.



b.



5. What did you notice in each of the pairs of Problems 1–4? How might what you noticed be helpful in solving problems like these?