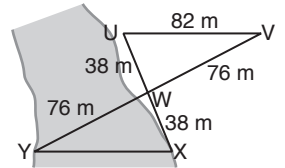


LESSON
4-6

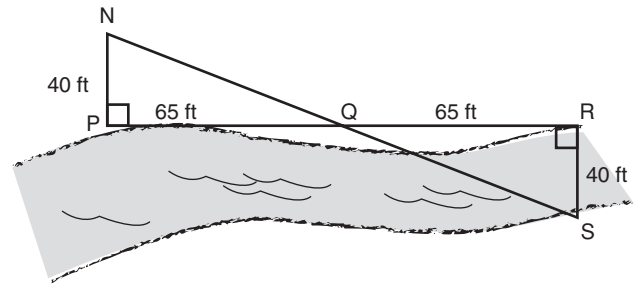
Problem Solving
Triangle Congruence: CPCTC

1. Two triangular plates are congruent. The area of one of the plates is 60 square inches. What is the area of the other plate? Explain.

2. An archaeologist draws the triangles to find the distance XY across a ravine. What is XY ? Explain.

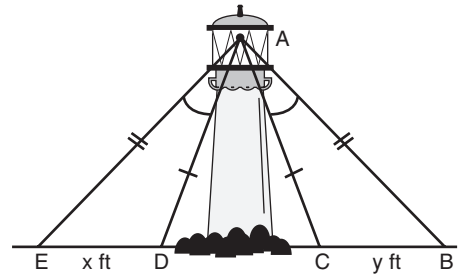


3. A city planner sets up the triangles to find the distance RS across a river. Describe the steps that she can use to find RS .



Choose the best answer.

4. A lighthouse and the range of its shining light are shown. What can you conclude?
- A** $x = y$ by CPCTC **C** $\angle AED \cong \angle ADE$ by CPCTC
B $x = 2y$ **D** $\angle AED \cong \angle ACB$



5. A rectangular piece of cloth 15 centimeters long is cut along a diagonal to form two triangles. One of the triangles has a side length of 9 centimeters. Which is a true statement?
- F** The second triangle has an angle measure of 15° by CPCTC.
G The second triangle has a side length of 9 centimeters by CPCTC.
H You cannot make a conclusion about the side length of the second triangle.
J The triangles are not congruent.
6. Small sandwiches are cut in the shape of right triangles. The longest sides of all the sandwiches are 3 inches. One sandwich has a side length of 2 inches. Which is a true statement?
- A** All the sandwiches have a side length of 2 inches by CPCTC.
B All the sandwiches are isosceles triangles with side lengths of 2 inches.
C None of the other sandwiches have side lengths of 2 inches.
D You cannot make a conclusion using CPCTC.