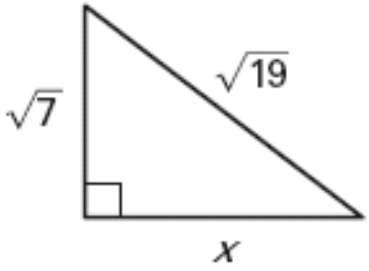
Station 1

Find the unknown side length. Simplify answers that are radicals.
Tell whether the side lengths form a Pythagorean triple.

1)



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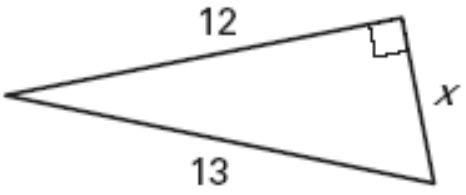

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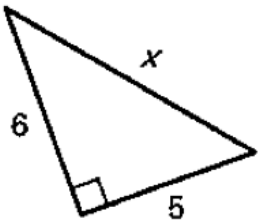

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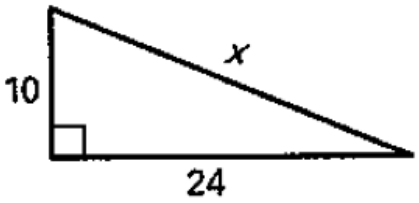

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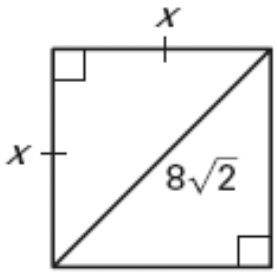

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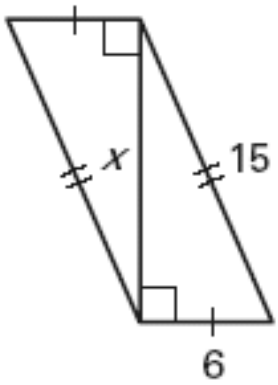


Station 2

The given lengths are two sides of a right triangle. All three side lengths of the triangle are integers and together form a Pythagorean triple. Find the length of the third side and tell whether it is a leg or the hypotenuse.

1) 40 and 41

2) 12 and 35

3) 63 and 65

4) 28 and 45

5) 56 and 65

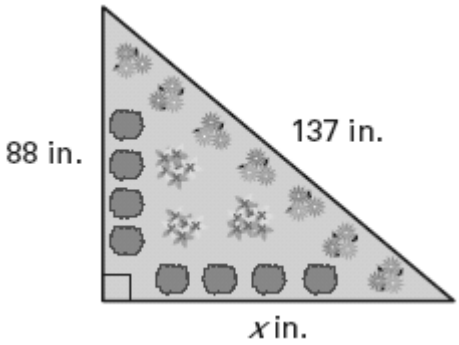
6) 20 and 29

7) 80 and 89

8) 48 and 55

Station 3

You have a garden that is in the shape of a right triangle with the dimensions shown.



1) Find the perimeter of the garden.

2) You are going to plant a post every 15 inches around the garden's perimeter. How many posts do you need?

3) You plan to attach fencing to the posts to enclose the garden. If each post costs $1.25 and each foot of fencing costs $0.70, how much will it cost to enclose the garden? Explain.

Station 4

Decide whether the numbers can represent the side lengths of a triangle. If they can, determine if it can be called a *right triangle*.

1) 5, 12, 13

2) $\sqrt{8}$, 4, 6

3) 20, 21, 28

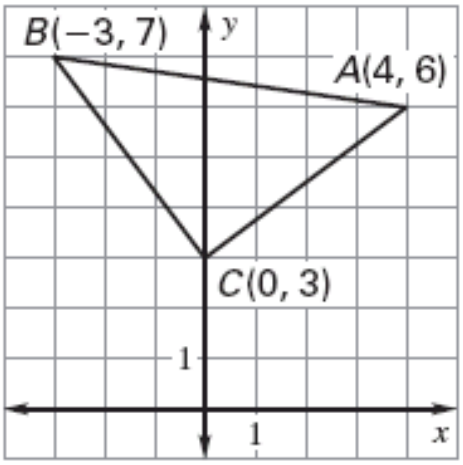
4) 15, 36, 39

5) $\sqrt{13}$, 10, 12

6) 14, 48, 50

Station 5

Determine whether $\triangle ABC$ is a right triangle.

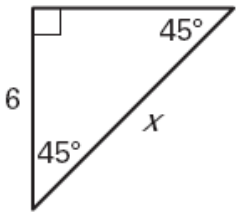


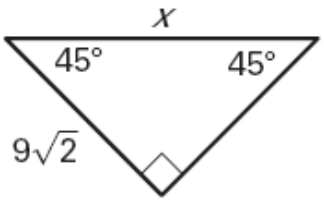
1) Find the slope of $\overline{AC}$ and the slope of $\overline{BC}$. What do the slopes tell you about $\angle ACB$? Is $\triangle ABC$ a right triangle? How do you know?

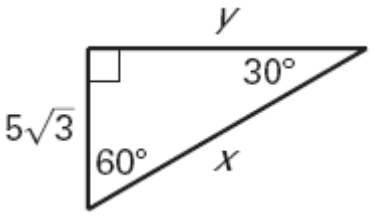
2) Use the distance formula and the converse of the Pythagorean theorem to determine whether $\triangle ABC$ is a right triangle.

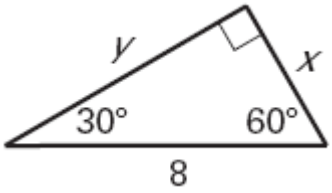
Station 6

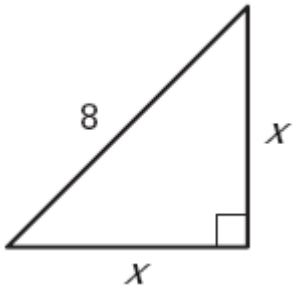
Find the value of *x* and *y*. Write your answer in simplest radical form.

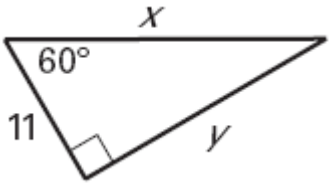
1) 

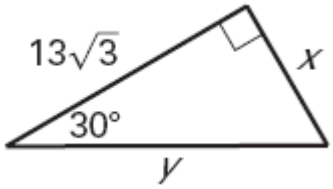
2) 

3) 

4) 

5) 

6) 

7) 

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