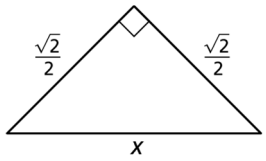
Name _____ Date _____

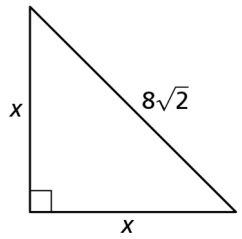
9.2 Extra Practice

In Exercises 1–3, find the value of *x*. Write your answer in simplest form.

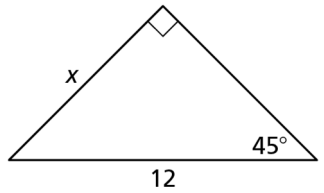
1.



2.

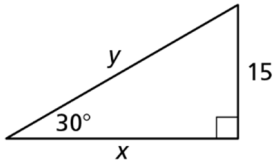


3.

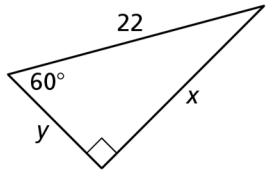


In Exercises 4–6, find the values of *x* and *y*. Write your answers in simplest form.

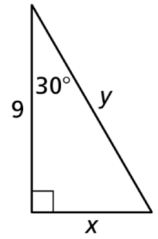
4.



5.



6.

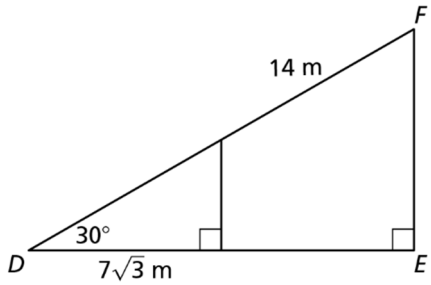


In Exercises 7 and 8, sketch the figure that is described. Find the indicated length. Write your answer in simplest form.

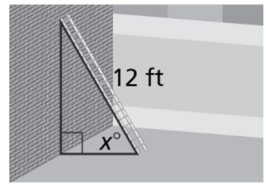
7. The length of a diagonal of a square is 32 inches. Find the perimeter of the square.

8. An isosceles triangle with 30° base angles has an altitude of $\sqrt{3}$ meters. Find the length of the base of the isosceles triangle.

9. Find the area of $\triangle DEF$. Write your answer in simplest form.



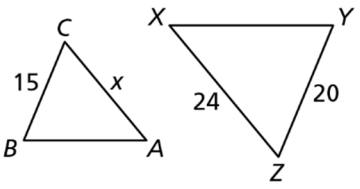
10. A 12-foot ladder is leaning up against a wall. How high does the ladder reach up the wall when x is 30°? 45°? 60°?



Name _____ Date _____

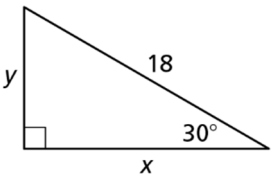
9.2 Review & Refresh

1. In the diagram, $\triangle ABC \sim \triangle XYZ$. Find the value of x.



2. Determine whether segments with lengths of 4.9 meters, 7.0 meters, and 8.5 meters form a triangle. If so, is the triangle *acute*, *right*, or *obtuse*?

3. Find the values of x and y. Write your answers in simplest form.

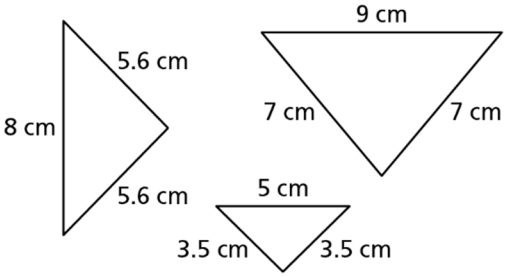


4. The endpoints of $\overline{JK}$ are $J(-4, 3)$ and $K(8, -1)$. Find the coordinates of the midpoint M.

5. Determine whether the polygons with the given vertices are congruent. Use transformations to explain your reasoning.

$A(2, 5)$, $B(4, 6)$, $C(5, 1)$ and
$D(-1, 4)$, $E(1, 5)$, $F(2, 0)$

6. Which tiles, if any, are similar? Explain.



7. Three vertices of $\square WXYZ$ are $W(-3, 4)$, $Y(7, 3)$, and $Z(1, 6)$. Find the coordinates of vertex X.

8. Rewrite the definition as a biconditional statement.

Definition A *trapezoid* is a quadrilateral with exactly one pair of parallel sides.

9.2 Self-Assessment

Use the scale to rate your understanding of the learning target and the success criteria.

1 I do not understand. 2 I can do it with help. 3 I can do it on my own. 4 I can teach someone else.

	Rating	Date
9.2 Special Right Triangles		
Learning Target: Understand and use special right triangles.	1 2 3 4	
I can find side lengths in 45°-45°-90° triangles.	1 2 3 4	
I can find side lengths in 30°-60°-90° triangles.	1 2 3 4	
I can use special right triangles to solve real-life problems.	1 2 3 4	