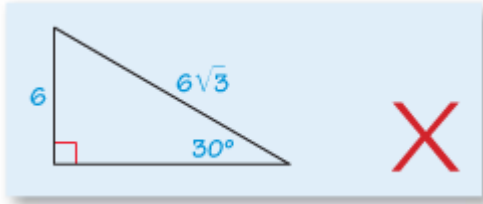
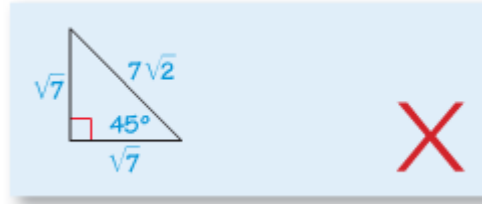


**Unit 3 Right Triangle Trigonometry Test Review**

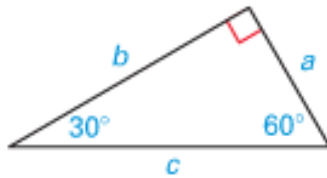
1. Describe and correct the error in finding the length of the hypotenuse.



2. Describe and correct the error in finding the length of the hypotenuse.



3. Complete the table for the given triangle.



$a$	9			11	
$b$		9	$5\sqrt{3}$		
$c$					16

4.

4. Complete the table for the given triangle.



$x$	5		$\sqrt{2}$	9	
$y$		$4\sqrt{2}$			24

5.

The side lengths of a triangle are given. Determine whether it is a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle, a  $30^\circ$ - $60^\circ$ - $90^\circ$  triangle or neither.

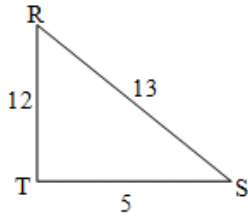
5. 6, 12, 8

6. 5, 5,  $\sqrt{2}$

7. 2, 4,  $2\sqrt{3}$

8. The escalator at the Wilshire/Vermont Metro Rail Station in Los Angeles rises 76 feet at a  $30^\circ$  angle. To find the distance,  $d$ , a person travels on the escalator stairs, write and solve a trigonometric equation.

9.  $\angle T$  is a right angle. Find the sine, cosine, and tangent of  $\angle S$ . Write your answers as both ratios and decimals. Round to the tenth.



10. You are measuring the height of a Sitka spruce tree in Alaska. You stand 45 feet from the base of the tree. You measure the angle of elevation from a point on the ground to the top of the tree to be  $59^\circ$ . To estimate the height of the tree, write and solve a trigonometric equation.

11. A ladder 5 m long leans against a vertical wall and makes a  $65^\circ$  angle with the ground. How far is the foot of the ladder from the wall?

12. An operator at the top of a lighthouse sights a sailboat. The point from which the sighting is made is 24 m above sea level. The angle of depression of the sighting is  $10^\circ$ . How far is the boat from the base of the lighthouse?