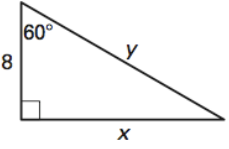
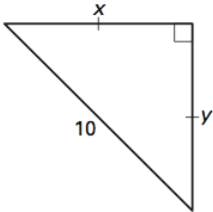
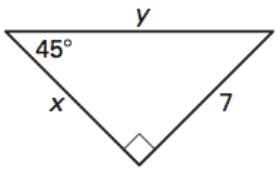
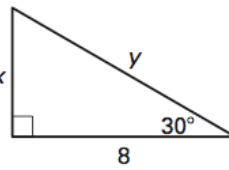
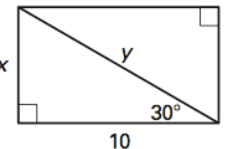
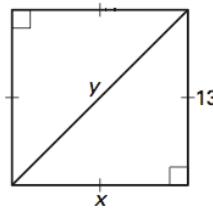
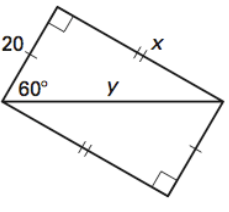
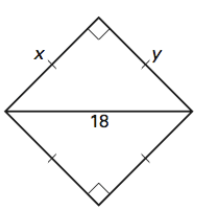
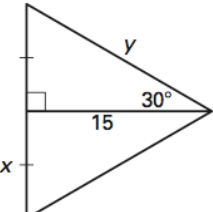
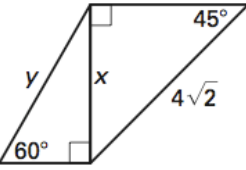


Algebra 2
12.1 Homework #2

Name: _____

Find the value of each variable. Write answers in simplest radical form.

<p>1.</p> 	<p>2.</p> 
<p>3.</p> 	<p>4.</p> 
<p>5.</p> 	<p>6.</p> 
<p>7.</p> 	<p>8.</p> 
<p>9.</p> 	<p>10.</p> 

Sketch the figure that is described. Find the requested length.

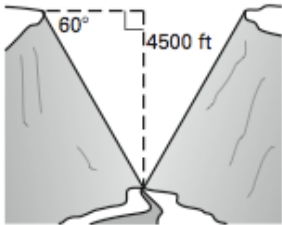
11. The perimeter of a square is 20 centimeters. Find the length of a diagonal.

12. The altitude of an equilateral triangle is 18 inches. Find the length of a side.

13. The hypotenuse of an isosceles right triangle is 16 centimeters. Find the length of a side.

14. The length of the diagonal of a square is $\frac{5\sqrt{2}}{2}$. Find the length of a side.

Use the diagram and the following information to solve 15 - 17.



A point on the edge of a symmetrical canyon is 4500 feet above a river that cuts through the canyon floor. The angle of depression from each side of the canyon to the canyon floor is 60° .

15. Find the distance across the canyon.

16. Find the length of the canyon wall (from the edge to the river).

17. Is it more or less than a mile across the canyon? (5280 feet = 1 mile).

Algebra 2
12.1 Homework #2

Name: _____ KEY _____

1. $x = 8\sqrt{3}$, $y = 16$	2. $x = 5\sqrt{2}$, $y = 5\sqrt{2}$
3. $x = 7$, $y = 7\sqrt{2}$	4. $x = \frac{8\sqrt{3}}{3}$, $y = \frac{16\sqrt{3}}{3}$
5. $x = \frac{10\sqrt{3}}{3}$, $y = \frac{20\sqrt{3}}{3}$	6. $x = 13$, $y = 13\sqrt{2}$
7. $x = 20\sqrt{3}$, $y = 40$	8. $x = 9\sqrt{2}$, $y = 9\sqrt{2}$
9. $x = 5\sqrt{3}$, $y = 10\sqrt{3}$	10. $x = 4$, $y = \frac{8\sqrt{3}}{3}$

11. $5\sqrt{2}$ cm
12. side length = $12\sqrt{3}$ cm
13. $8\sqrt{2}$ cm
14. $\frac{5}{2}$
15. $3000\sqrt{3} \approx 5,196.2$ feet
16. $3000\sqrt{3} \approx 5,196.2$ feet
17. less than a mile