

Name: KEY

Date: \_\_\_\_\_

Period: \_\_\_\_\_

Geo w/ Trig

**Practice A**

**Part A:** Simplify the expression or solve the equation.

1.  $\sqrt{192}$

$$\frac{\sqrt{64} \sqrt{3}}{\sqrt{8} \sqrt{3}}$$

$$\boxed{4}$$

2.  $\frac{20}{\sqrt{2}}$

$$\frac{20\sqrt{2}}{2} = \boxed{10\sqrt{2}}$$

3.  $(\sqrt{6})^2$

$$\boxed{6}$$

4.  $(2\sqrt{5})^2$

$$\frac{4 \cdot 5}{\boxed{20}}$$

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

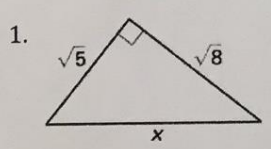
$$\boxed{\sqrt{3}}$$

6.  $\frac{\sqrt{3}}{9} = \frac{2}{x}$

$$x\sqrt{3} = 18$$

$$x = \frac{18}{\sqrt{3}} = \frac{18\sqrt{3}}{3} = \boxed{6\sqrt{3}}$$

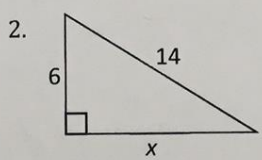
**Part B:** Find the missing side lengths. Give an exact answer in simplest form.



$$5 + 8 = x^2$$

$$13 = x^2$$

$$\boxed{x = \sqrt{13}}$$

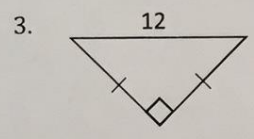


$$6^2 + x^2 = 14^2$$

$$36 + x^2 = 196$$

$$x^2 = 160$$

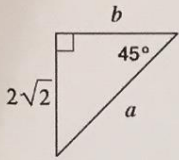
$$x = 4\sqrt{10}$$



$$\frac{12}{\sqrt{2}} = \frac{12\sqrt{2}}{2} = 6\sqrt{2}$$

Part C: Find the value of the variables. Leave all values in simplest radical form.

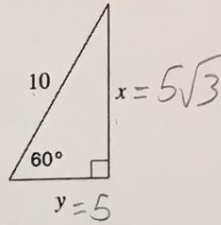
1)



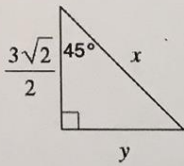
$$b = 2\sqrt{2}$$

$$a = 4$$

2)



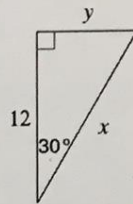
3)



$$x = 3\sqrt{2}$$

$$y = \frac{3\sqrt{2}}{2}$$

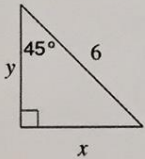
4)



$$y = \frac{12}{\sqrt{3}} = \frac{12\sqrt{3}}{3} = 4\sqrt{3}$$

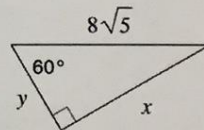
$$x = 8\sqrt{3}$$

5)



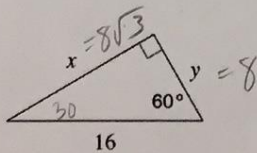
$$x = \frac{6}{\sqrt{2}} = \frac{6\sqrt{2}}{2} = 3\sqrt{2}$$

6)



$$y = 4\sqrt{5} \quad x = 4\sqrt{15}$$

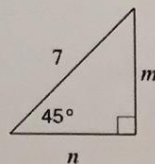
7)



$$x = 8\sqrt{3}$$

$$y = 8$$

8)



$$m = \frac{7\sqrt{2}}{2}$$

$$n = \frac{7\sqrt{2}}{2}$$

$$m = \frac{7\sqrt{2}}{2}$$