

Name: **Key**

# Special Right Triangle Homework

## 30-60-90



Find the missing measures. Write all answers in simplest radical form.

1)  $s = 7$

$2s = 14$   
 $s\sqrt{3} = 7\sqrt{3}$

2)  $s = 3\sqrt{2}$

$2 \cdot 3\sqrt{2} = 6\sqrt{2}$   
 $3\sqrt{2} \cdot \sqrt{3} = 3\sqrt{6}$

3)  $s = 9$

$\frac{2s}{2} = \frac{18}{2}$   
 $s = 9$   
 $s\sqrt{3} = 9\sqrt{3}$

4)  $s\sqrt{3} = 17\sqrt{3}$

$s = 17$   
 $2s = 34$   
 $\frac{s\sqrt{3}}{\sqrt{3}} = \frac{17\sqrt{3}}{\sqrt{3}}$   
 $s = 17$

5)  $s\sqrt{3} = 16$

$s = \frac{16\sqrt{3}}{3}$   
 $\frac{s\sqrt{3}}{\sqrt{3}} = \frac{16}{\sqrt{3}}$   
 $s = \frac{16}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{16\sqrt{3}}{3}$

6)  $s\sqrt{3} = 12$

$s = 4\sqrt{3}$   
 $2s = 8\sqrt{3}$   
 $\frac{s\sqrt{3}}{\sqrt{3}} = \frac{12}{\sqrt{3}}$   
 $s = \frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{3} = 4\sqrt{3}$

7)  $2s = 21$

$s = 11.5$   
 $s\sqrt{3} = 11.5\sqrt{3}$   
 $\frac{2s}{2} = \frac{21}{2}$   
 $s = 11.5$

8)  $s\sqrt{3} = 10\sqrt{3}$

$s = 10\sqrt{3}$   
 $2s = 20\sqrt{3}$   
 $\frac{s\sqrt{3}}{\sqrt{3}} = \frac{10\sqrt{3}}{\sqrt{3}}$   
 $s = 10$   
 $s = 10\sqrt{3}$

9)  $s = 17.5$

$s = 17.5$   
 $s\sqrt{3} = 17.5\sqrt{3}$   
 $\frac{2s}{2} = \frac{35}{2}$   
 $s = 17.5$