

Name: _____

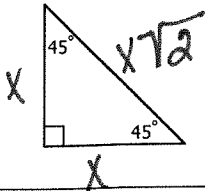
Class: _____

Topic: _____

Date: _____

**45°-45°-90°
Special Right Δ**

Notes

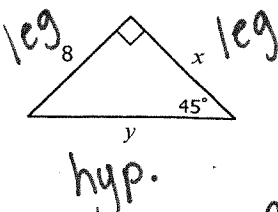


- Leg = x
- Hypotenuse = x√2

The legs of a 45°-45°-90° triangle are always congruent.

Practice! Find the value of each missing variable.

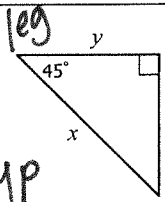
1.



leg 8 leg x hyp. y

$x = \underline{8}$
 $y = \underline{8\sqrt{2}}$

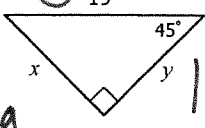
2.



leg y leg 25 hyp. x

$x = \underline{25\sqrt{2}}$
 $y = \underline{25}$

3.

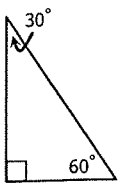


leg x leg y hyp. 19

$\frac{19}{\sqrt{2}} = \frac{19\sqrt{2}}{2}$ $x = \underline{\frac{19\sqrt{2}}{2}}$
 $y = \underline{\frac{19\sqrt{2}}{2}}$

**30°-60°-90°
Special Right Δ**

Notes

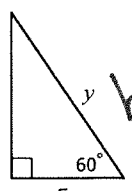


- Shorter Leg = x
- Longer Leg = x√3
- Hypotenuse = 2x

The shorter leg is always opposite the 30° angle and the longer leg is always opposite the 60° angle.

Practice! Find the value of each missing variable.

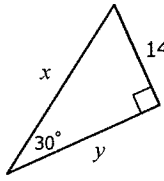
4.



leg 5 leg x hyp. y

$x = \underline{5\sqrt{3}}$
 $y = \underline{10}$

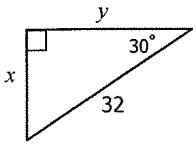
5.



leg x leg y hyp. 14

$x = \underline{7}$
 $y = \underline{7\sqrt{3}}$

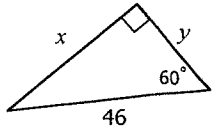
6.



leg x leg y hyp. 32

$x = \underline{16}$
 $y = \underline{16\sqrt{3}}$

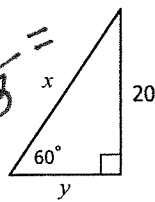
7.



leg x leg y hyp. 46

$x = \underline{23}$
 $y = \underline{23\sqrt{3}}$

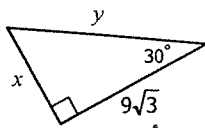
8.



leg x leg y hyp. 20

$x = \underline{\frac{40\sqrt{3}}{3}}$
 $y = \underline{\frac{20\sqrt{3}}{3}}$

9.

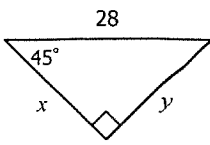


leg x leg 9√3 hyp. y

$\frac{9\sqrt{3}}{\sqrt{3}} = \frac{9\sqrt{3}}{\sqrt{3}} = 9$ $x = \underline{9}$
 $y = \underline{18}$

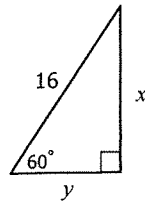
MIXED PRACTICE! Find the value of each variable.

10.



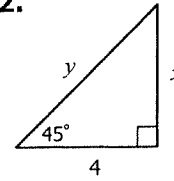
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

11.



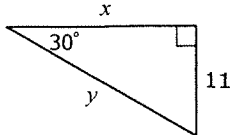
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

12.



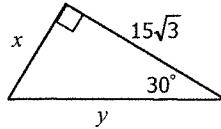
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

13.



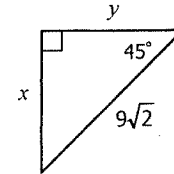
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

14.



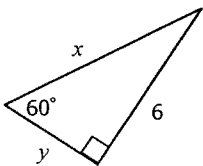
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

15.



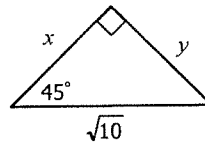
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

16.



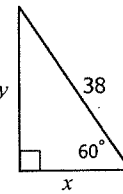
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

17.



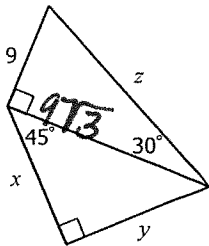
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

18.



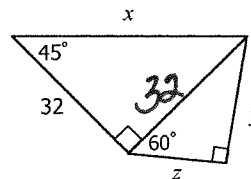
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$

19.



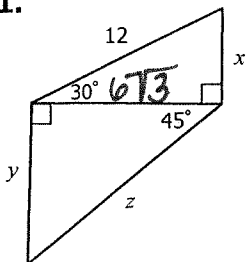
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

20.



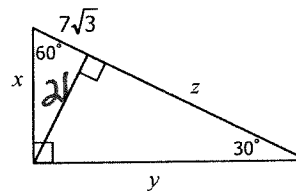
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

21.



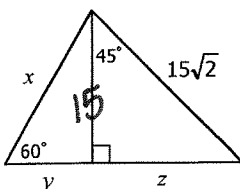
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

22.



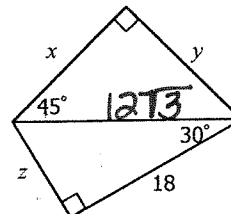
$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

23.



$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

24.



$x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

Name: _____

Unit 8: Right Triangles & Trigonometry

Date: _____ Bell: _____

Homework 2: Special Right Triangles



**** This is a 2-page document! ****

Directions: Find the value of each variable.

1.

$x =$ _____
 $y =$ _____

2.

$\frac{30}{\sqrt{2}} = \frac{30\sqrt{2}}{2}$ $x = \frac{15\sqrt{2}}$
 $y = \frac{15\sqrt{2}}$

3.

$x =$ _____
 $y =$ _____

4.

$x =$ _____
 $y =$ _____

5.

$x =$ _____
 $y =$ _____

6.

$x =$ _____
 $y =$ _____

7.

$x =$ _____
 $y =$ _____

8.

$\frac{12}{\sqrt{3}} = \frac{12\sqrt{3}}{3}$ $x =$ _____
 $y =$ _____

9.

$x =$ _____
 $y =$ _____

10.

$\sqrt{6} \cdot \sqrt{3} = \sqrt{18}$
 $= 3\sqrt{2}$

$x =$ _____
 $y =$ _____

11.

$x =$ _____
 $y =$ _____

12.

$x =$ _____
 $y =$ _____

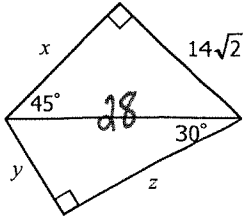
13.

$x =$ _____
 $y =$ _____
 $z =$ _____

14.

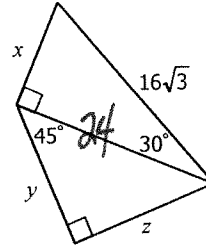
$x =$ _____
 $y =$ _____
 $z =$ _____

15.



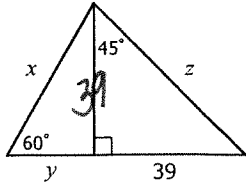
$x =$ _____
 $y =$ _____
 $z =$ _____

16.



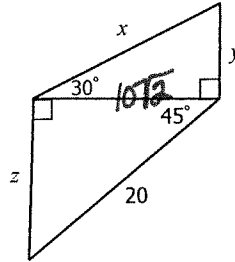
$x =$ _____
 $y =$ _____
 $z =$ _____

17.



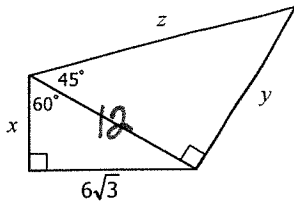
$x =$ _____
 $y =$ _____
 $z =$ _____

18.



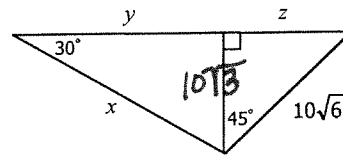
$x =$ _____
 $y =$ _____
 $z =$ _____

19.



$x =$ _____
 $y =$ _____
 $z =$ _____

20.



$x =$ _____
 $y =$ _____
 $z =$ _____