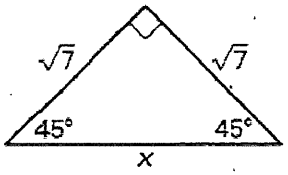
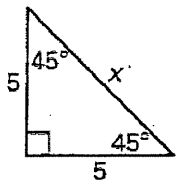
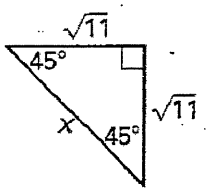
Homework Quiz Practice Problems **Aug 14, 2015**

Find missing side. Express as exact answers (no decimals)

1) 

2) 

3) 

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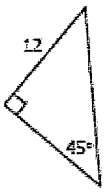
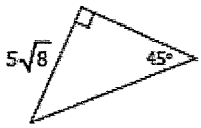
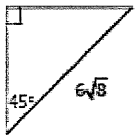
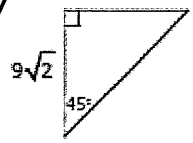
4) 

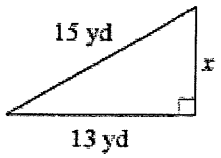
5) 

6) 

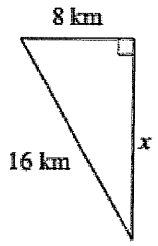
7) 

Find the missing side of each triangle. Leave your answers in simplest radical form.

8)



9)



Find the missing side of each right triangle. Side *c* is the hypotenuse. Sides *a* and *b* are the legs. Leave your answers in simplest radical form.

10) $a = 11$ m, $c = 15$ m

11) $b = \sqrt{6}$ yd, $c = 4$ yd

Classify each triangle as obtuse, right, or acute. Show Work!

12) 11, 19 , 12

13) 37, 12, 35

14) 11, 12, 13

45-45-90
Triangle Property

leg = leg hypotenuse (×√2 / ÷√2)

Key

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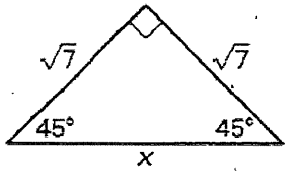
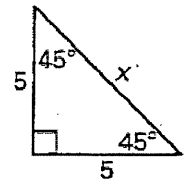
Find missing side. Express as exact answers (no decimals)

1)



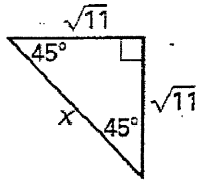
$x = \sqrt{7} \cdot \sqrt{2} = \boxed{\sqrt{14}}$

2).



$\boxed{x = 5\sqrt{2}}$

3)



$x = \sqrt{11} \cdot \sqrt{2}$

$\boxed{x = \sqrt{22}}$

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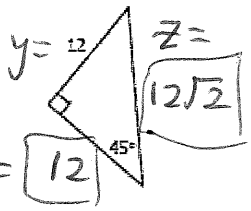
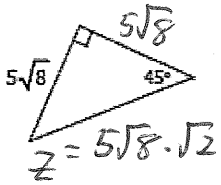
4)



$\boxed{z = 12\sqrt{2}}$

$x = \boxed{12}$

5)



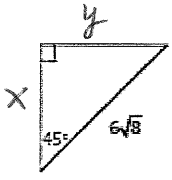
$z = 5\sqrt{8} \cdot \sqrt{2}$

$= 5\sqrt{16}$

$= 5 \cdot 4$

$z = \boxed{20}$

6)

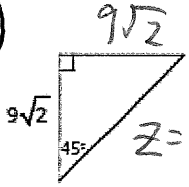


$x = \frac{6\sqrt{8}}{\sqrt{2}} = 6\sqrt{4}$

$\boxed{x = 6 \cdot 2 = 12}$

$\boxed{y = 12}$

7)



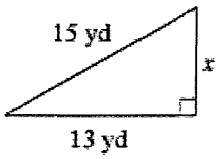
$z = 9\sqrt{2} \cdot \sqrt{2}$

$z = 9 \cdot 2$

$\boxed{z = 18}$

Find the missing side of each triangle. Leave your answers in simplest radical form.

8)

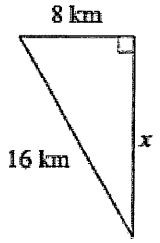


$x^2+13^2=15^2$

$x^2=56$

$x=2\sqrt{14}$

9)



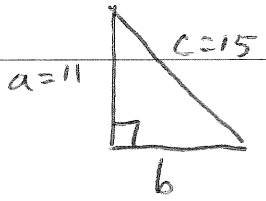
$x^2+8^2=16^2$

$x^2=192$

$x=8\sqrt{3}$

Find the missing side of each right triangle. Side *c* is the hypotenuse. Sides *a* and *b* are the legs. Leave your answers in simplest radical form.

10) $a=11$ m, $c=15$ m

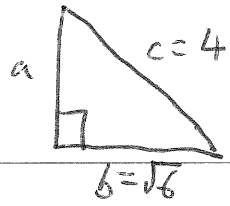


$11^2+b^2=15^2$

$b^2=104$

$b=\sqrt{104}=2\sqrt{26}$

11) $b=\sqrt{6}$ yd, $c=4$ yd



$a^2+(\sqrt{6})^2=4^2$

$a^2+6=16$

$a^2=10$

$a=\sqrt{10}$

Classify each triangle as obtuse, right, or acute. Show Work!

12) 11, 19 , 12

$19^2 \quad 11^2+12^2$

$361>265$

obtuse triangle

13) 37, 12, 35

$37^2 \quad 12^2+35^2$

$1369=1369$

Right Triangle

14) 11, 12, 13

$13^2 \quad 11^2+12^2$

$169 \quad 121+144$

$169<265$

acute triangle