Homework Questions

Answers:

1. 6 sqrt 3
2. 39
3. 25
4. 15
5. 18 sqrt 2
6. 2 sqrt 7
7. sqrt 301
8. 13
9. 45
10. 12
11. 5 sqrt 13
12. 14
13. 16 sqrt 3
14. 96
15. 49.98 square in.
16. 669.5 square ft.
17. 2 sqrt 6
18. 3 sqrt 3
19. 10 sqrt 2
20. 2 sqrt 31
21. 6 sqrt 7
22. 90.06 square cm
23. 155.8 square ft.
24. 154.97 square in.
25. C
26. D
27. 8 sqrt 6
28. 217 square in.
29. 1056 square m
30. 32 square in.
31. no
32. yes Acute
33. yes Right
34. yes Right
35. yes Right

(22) $l = 13 \quad h = 19$

$19^2 = 13^2 + b^2$

$-13^2 \quad -13^2$

$\sqrt{192} = \sqrt{b^2}$

$8\sqrt{3} = b$

$A = \frac{1}{2}(8\sqrt{3})(13)$

(31) 26, 35, 62

$26 + 35 = 61$

NO

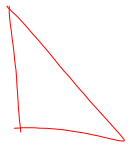
(32) 14, 18, 29

Triangle

$29^2 = 14^2 + 18^2$

$841 > 520$

Obtuse



(1) $42^2 = 36^2 + x^2$

$-36^2 \quad -36^2$

$\sqrt{468} = \sqrt{x^2}$

$6\sqrt{13} = x$

(2) $x^2 = 36^2 + 15^2$

$\sqrt{x^2} = \sqrt{1521}$

$x = 39$

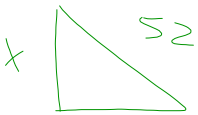
(4) $17^2 = 8^2 + x^2$

$-8^2 \quad -8^2$

$\sqrt{225} = x^2$

$15 = x$

(13)



$A = \frac{1}{2}bh$

$A = \frac{1}{2}(16\sqrt{3})(44)$

$x^2 + 44^2 = 52^2$

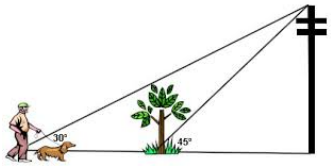
$-44^2 \quad -44^2$

$\sqrt{x^2} = \sqrt{768}$

$x = 16\sqrt{3}$

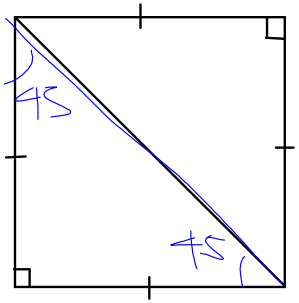
Name_____
Period___

11.2 Special Right Triangles

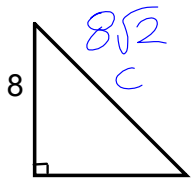


I can use properties of Special Right triangles to solve

What kind of triangle do you get if you draw a diagonal in a square? Right Isosceles



Let's find the hypotenuse of each of the following.

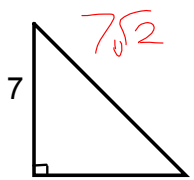


$8^2+8^2=c^2$

$64+64=c^2$

$\sqrt{128}=\sqrt{c^2}$

$8\sqrt{2}=c$

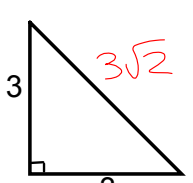


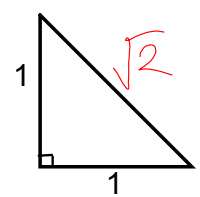
$7^2+7^2=c^2$

$49+49=c^2$

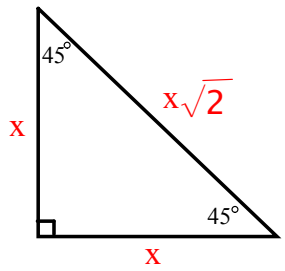
$\sqrt{98}=\sqrt{c^2}$

$7\sqrt{2}=c$

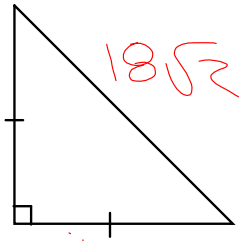




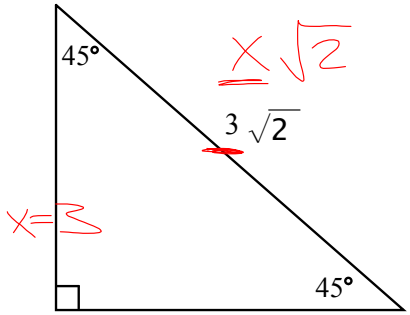
45-45-90 Right Triangle In a 45-45-90 triangle the hypotenuse is $\sqrt{2}$ times as long as each leg.



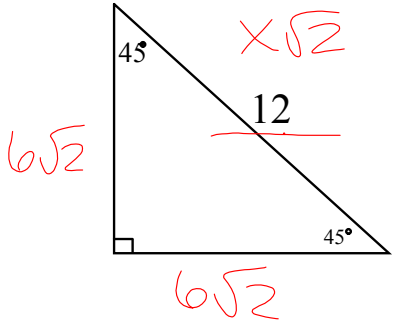
Find the length of each side of the triangle.



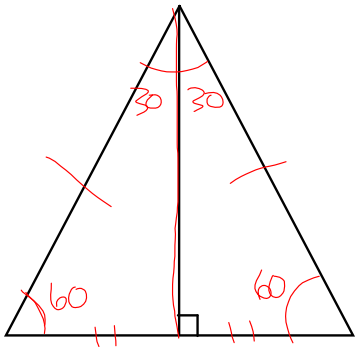
Find the length of each leg.

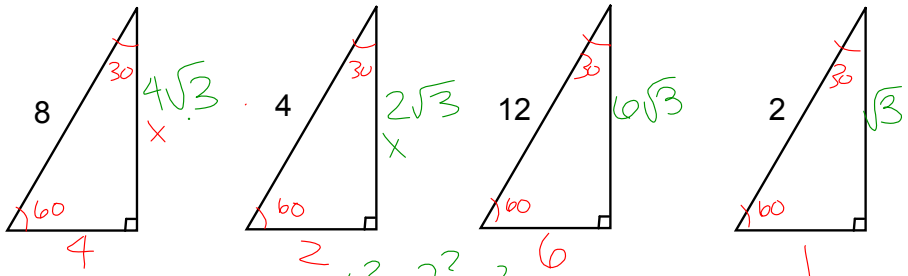


Find the measure of each leg.



What kind of triangle do you get if you draw the altitude of a equilateral triangle?





$8^2 = 4^2 + x^2$

$-4^2 \quad -4^2$

$\sqrt{48} = \sqrt{x^2}$

$4\sqrt{3} = x$

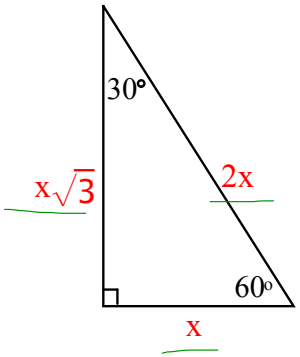
$4^2 = 2^2 + x^2$

$-2^2 \quad -2^2$

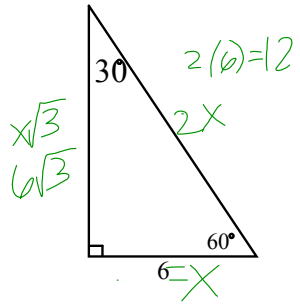
$\sqrt{12} = \sqrt{x^2}$

$2\sqrt{3} = x$

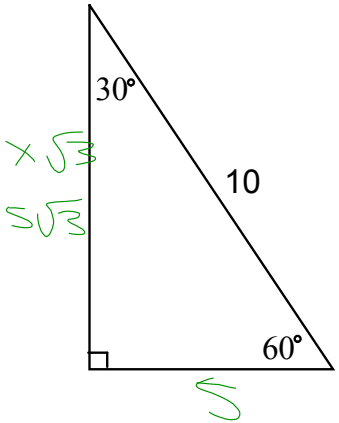
30-60-90 Right Triangle: The hypotenuse is twice as long as the shorter leg, and the longer leg is $\sqrt{3}$ times as long as the shorter leg.

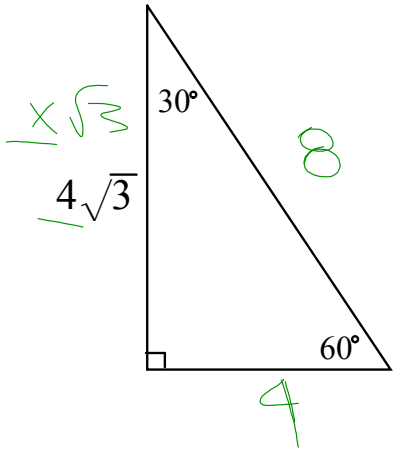


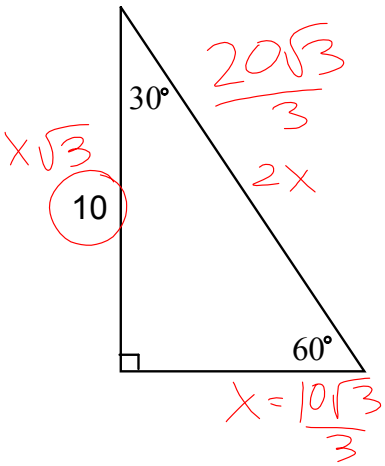
Find the missing sides.



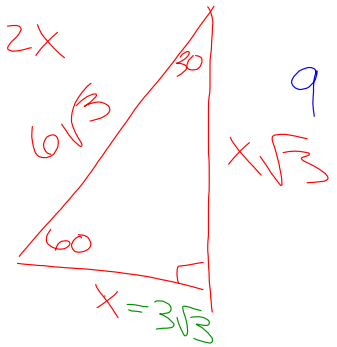
Find the missing sides using what you know about special right triangles.



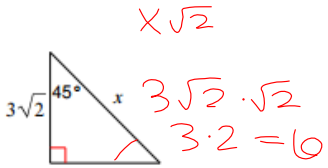




What is the length of an altitude of an equilateral triangle with side lengths $6\sqrt{3}$?



Practice:

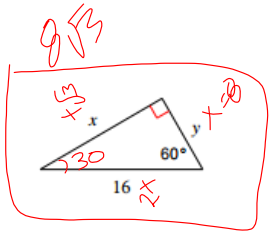


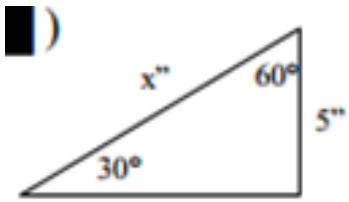
$\times\sqrt{2}$

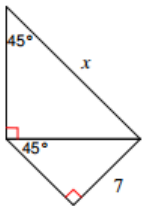
$3\sqrt{2}\cdot\sqrt{2}$

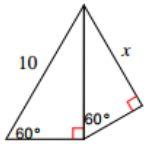
$3\cdot 2 = 6$

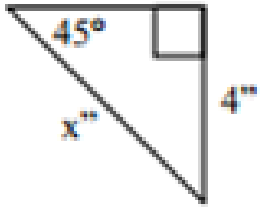
$y = 3\sqrt{2}$

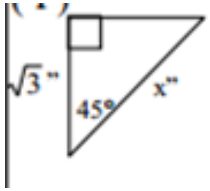


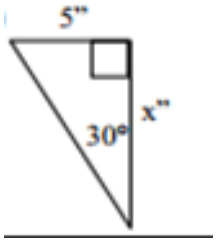




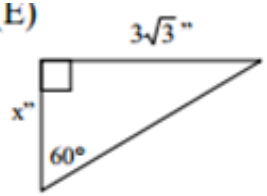



45°
4"
x"

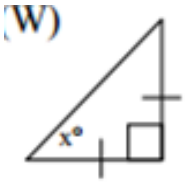

√3"
45°
x"

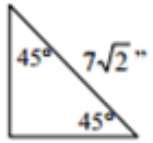


(E)



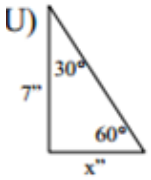
(W)

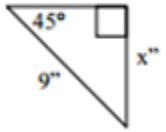


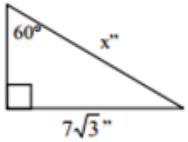


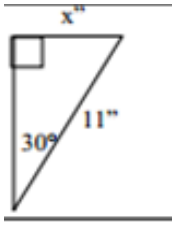
x"

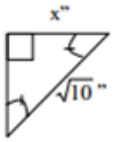
U)

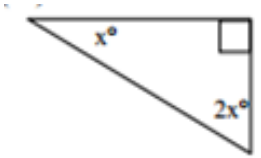


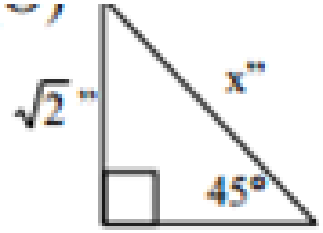



60°
x"
7√3"

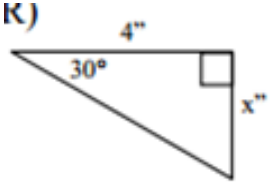

x"
11"
30°

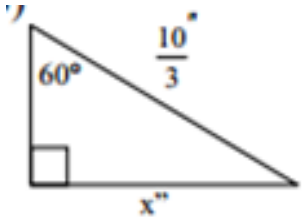

x°
√10 "


x°
2x°



K)





Test Review