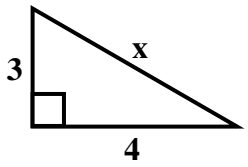
Geometry Name:_____

Chapter 7 Review Part B

Find the missing length of the right triangle.

1.



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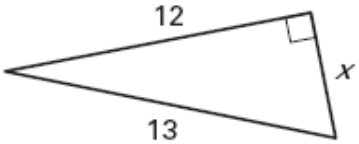

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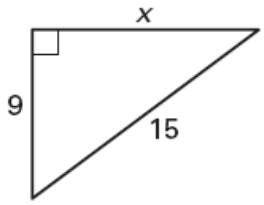

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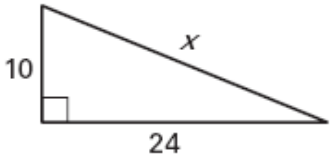

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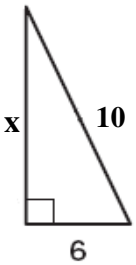

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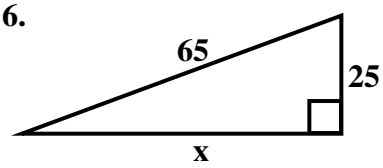

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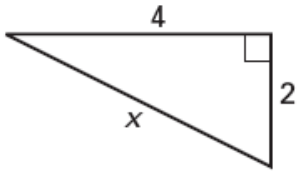

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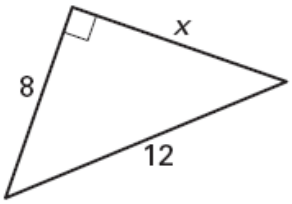

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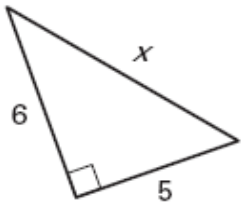

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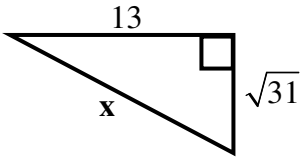

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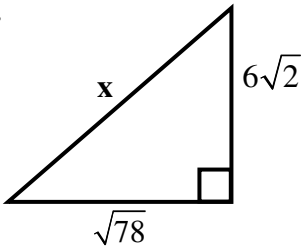

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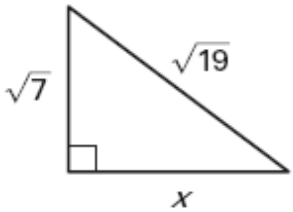
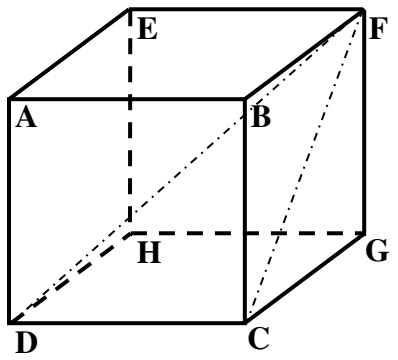
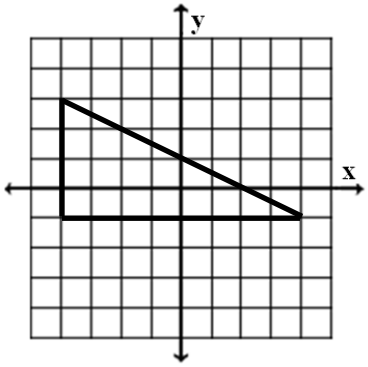


13. The figure below is a cube with side lengths 3 units. Find FC and FD.

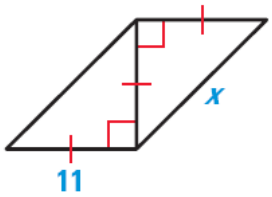


14. Find the length of the hypotenuse of the triangle.



Find the value of x.

15.



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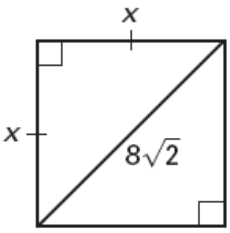
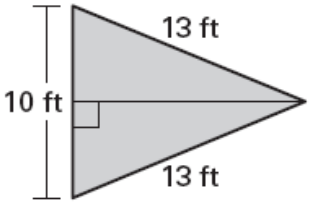


Find the area of the triangle

17.



Classify a triangle with the given side lengths as right, acute, or obtuse.
Note: The side lengths are listed from smallest to largest.

18. $4, \sqrt{15}, \sqrt{33}$

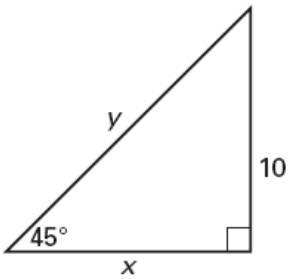
19. $3\sqrt{2}, \sqrt{31}, 7$

Find the value of x.

20. $x\sqrt{3}, 3x, 12;$ acute

Find the value of the variable(s).

21.



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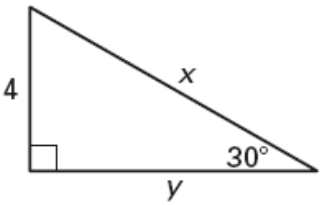

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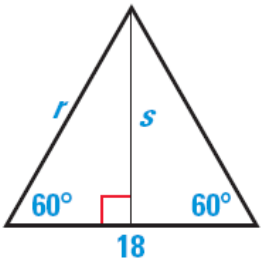

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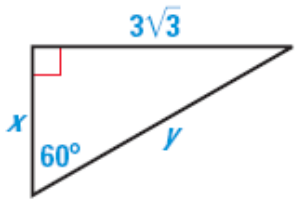

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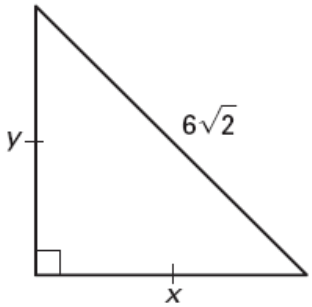

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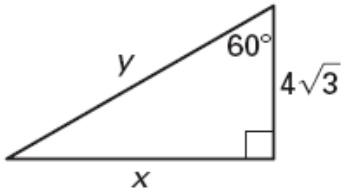

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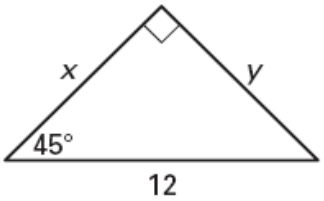

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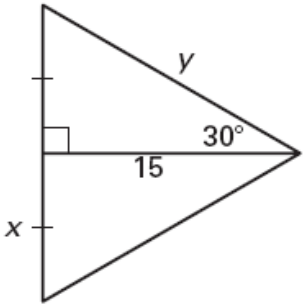

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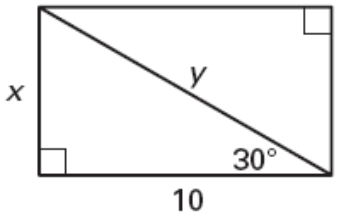


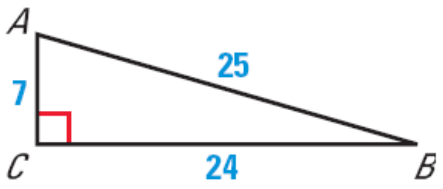
30. The side length of an equilateral triangle is 20 centimeters. Find the area of the triangle.

31. The perimeter of a square is 20 feet. Find the length of a diagonal.

32. The altitude (height) of an equilateral triangle is 18 inches. Find the length of a side.

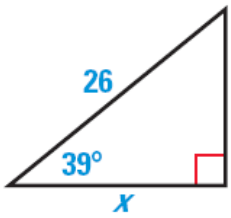
33. The diagonal of a square is 8 yards. Find its area.

34. Find the sine, cosine, and tangent of angle A and angle B.



Find the value of the variable.

35.



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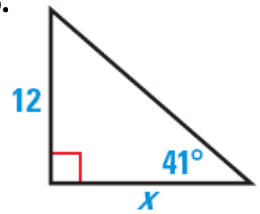

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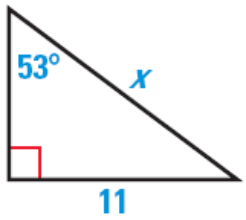

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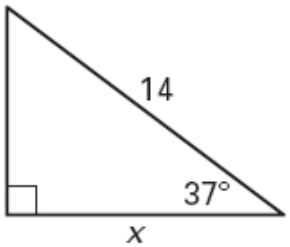

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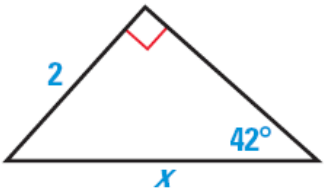

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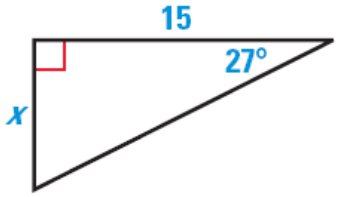

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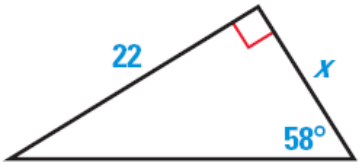

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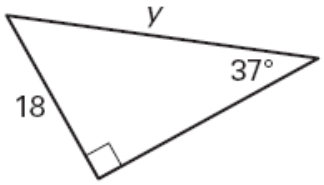

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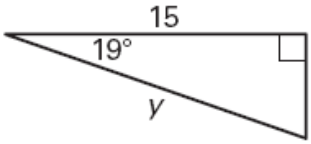
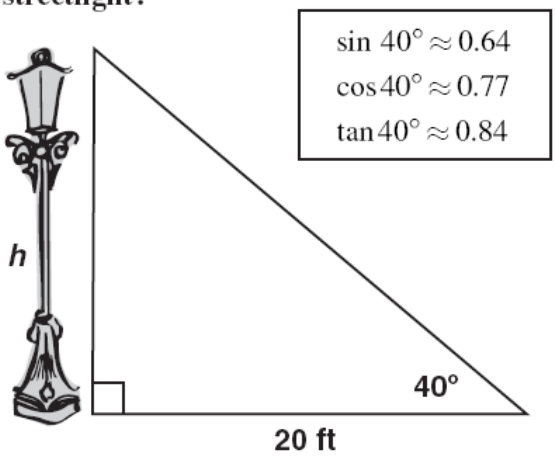
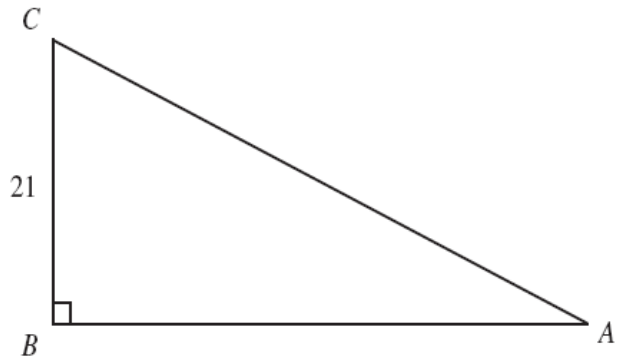


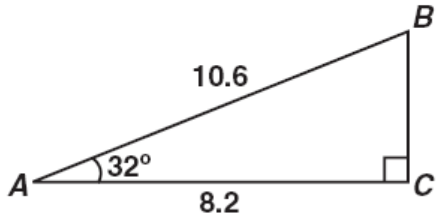
44. **Approximately how many feet tall is the streetlight?**



45. **In the figure below, $\sin A = 0.7$. What is the length of $\overline{AC}$?**



46. **Right triangle ABC is pictured below.**



Which equation gives the correct value for BC?

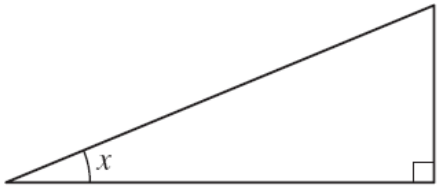
A $\sin 32° = \dfrac{BC}{8.2}$

B $\cos 32° = \dfrac{BC}{10.6}$

C $\tan 58° = \dfrac{8.2}{BC}$

D $\sin 58° = \dfrac{BC}{10.6}$

47. **In the figure below, if $\sin x = \dfrac{5}{13}$, what are $\cos x$ and $\tan x$?**



Answer Key:

1) $x = 5$ **2)** $x = 5$ **3)** $x = 12$ **4)** $x = 26$ **5)** $x = 8$ **6)** $x = 60$ **7)** $x = 2\sqrt{5}$ **8)** $x = 4\sqrt{5}$

9) $x = \sqrt{61}$ **10)** $x = 10\sqrt{2}$ **11)** $x = 5\sqrt{6}$ **12)** $x = 2\sqrt{3}$ **13)** $FC = 3\sqrt{2}, FD = 3\sqrt{3}$ **14)** $4\sqrt{5}$

15) $x = 11\sqrt{2}$ **16)** $x = 8$ **17)** $A = 60\text{ ft}^2$ **18)** Obtuse **19)** Right **20)** $x > 2\sqrt{3}$ **21)** $x = 10, y = 10\sqrt{2}$

22) $x = 8, y = 4\sqrt{3}$ **23)** $s = 9\sqrt{3}, r = 18$ **24)** $x = 3, y = 6$ **25)** $x = 6, y = 6$ **26)** $x = 12, y = 8\sqrt{3}$

27) $x = 6\sqrt{2}, y = 6\sqrt{2}$ **28)** $x = 5\sqrt{3}, y = 10\sqrt{3}$ **29)** $x = \frac{10\sqrt{3}}{3}, y = \frac{20\sqrt{3}}{3}$ **30)** $A = 100\sqrt{3}\text{ cm}^2$

31) $d = 5\sqrt{2}$ ft **32)** $12\sqrt{3}$ in. **33)** $A = 32\text{ yd}^2$

34) $\sin A = \frac{24}{25}, \cos A = \frac{7}{25}, \tan A = \frac{24}{7}, \sin B = \frac{7}{25}, \cos B = \frac{24}{25}, \tan B = \frac{7}{24}$ **35)** $x = 26\cos 39°$

36) $x = \frac{12}{\tan 41°}$ **37)** $x = \frac{11}{\sin 53°}$ **38)** $x = 14\cos 37°$ **39)** $x = \frac{2}{\sin 42°}$ **40)** $x = 15\tan 27°$ **41)** $x = \frac{22}{\tan 58°}$

42) $y = \frac{18}{\sin 37°}$ **43)** $y = \frac{15}{\cos 19°}$ **44)** $h = 16.8$ ft **45)** $AC = 30$ **46)** C **47)** $\cos x = \frac{12}{13}, \tan x = \frac{5}{12}$