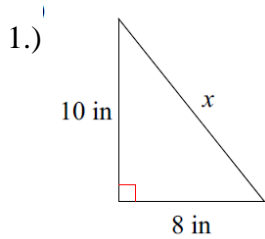
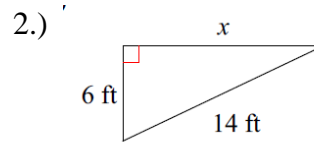


Unit 6: Right Triangles

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

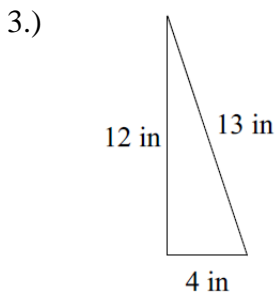


- A) $2\sqrt{57}$ in B) $2\sqrt{41}$ in
C) 6 in D) $2\sqrt{66}$ in

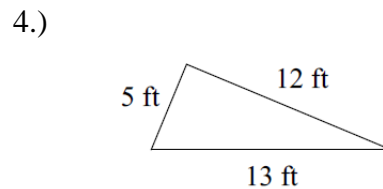


- A) $4\sqrt{10}$ ft B) $2\sqrt{58}$ ft
C) $2\sqrt{31}$ ft D) $2\sqrt{89}$ ft

State if each triangle is acute, obtuse, or right.

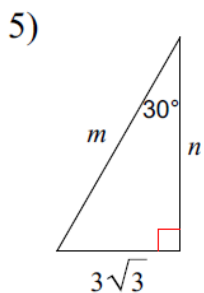


- A) Acute B) Right
C) Obtuse D) Not a triangle

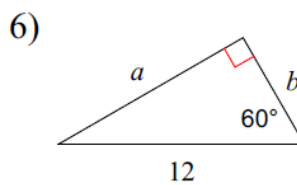


- A) Acute B) Right
C) Obtuse D) Not a triangle

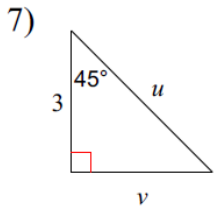
Find the missing side lengths. Leave your answers as radicals in simplest form.



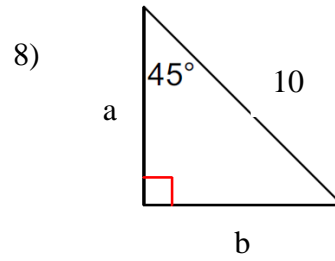
- A) $m = 6\sqrt{3}$, $n = 9\sqrt{3}$
B) $m = 12$, $n = 9\sqrt{3}$
C) $m = 12$, $n = 9$
D) $m = 6\sqrt{3}$, $n = 9$



- A) $a = 6\sqrt{3}$, $b = 6$
B) $a = 3\sqrt{3}$, $b = 4\sqrt{3}$
C) $a = 3\sqrt{3}$, $b = 6$
D) $a = 6\sqrt{3}$, $b = 4\sqrt{3}$



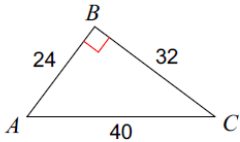
- A) $u = 3\sqrt{3}, v = 3\sqrt{2}$
 B) $u = 3\sqrt{2}, v = 3$
 C) $u = 3\sqrt{6}, v = 3$
 D) $u = 3\sqrt{2}, v = 3\sqrt{3}$



- A) $a = 5\sqrt{2}, b = 5\sqrt{2}$
 B) $a = 5, b = 5$
 C) $a = 10\sqrt{2}, b = 10$
 D) $a = 5, b = 5\sqrt{2}$

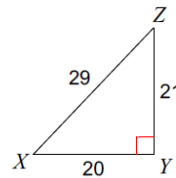
Find the value of each trigonometric ratio.

9) $\tan A$



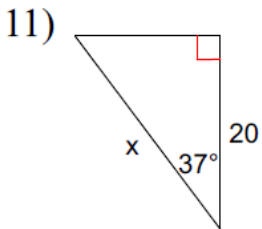
- A) $\frac{5}{3}$ B) $\frac{3}{5}$
 C) $\frac{4}{3}$ D) $\frac{5}{4}$

10) $\cos X$

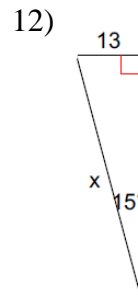


- A) $\frac{20}{29}$ B) $\frac{21}{29}$
 C) $\frac{29}{21}$ D) $\frac{21}{20}$

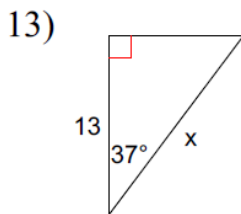
Find the missing side. Round to the nearest tenth.



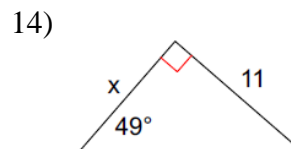
- A) 31.6 B) 16.0
 C) 35.1 D) 25.0



- A) 68.9 B) 3.4
 C) 38.3 D) 50.2



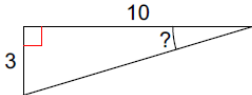
- A) 10.4 B) 14.8
 C) 16.1 D) 16.3



- A) 12.7 B) 9.6
 C) 13.9 D) 11.1

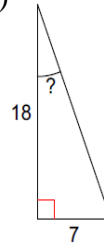
Find the measure of the indicated angle to the nearest degree.

15)



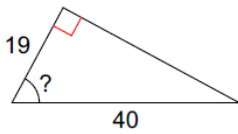
- A) 17° B) 27°
 C) 25° D) 73°

16)



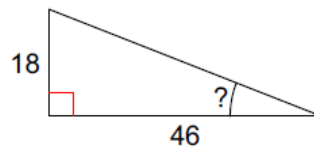
- A) 4° B) 23°
 C) 69° D) 21°

17)



- A) 65° B) 25°
 C) 28° D) 62°

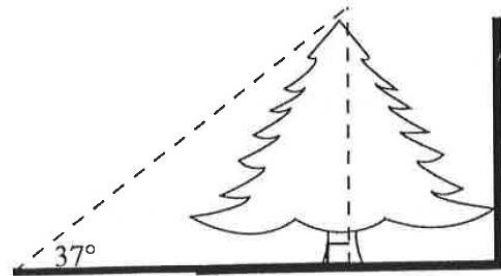
18)



- A) 23° B) 34°
 C) 69° D) 21°

19) A slide 5.1 m long makes an angle of 33° with the ground. How high is the top of the slide above the ground?

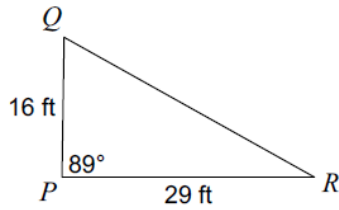
20) From a point 65 ft from the base of a tree, the angle from the ground level to the top of the tree is 37° . Find the height of the tree to the nearest foot.



21) If an equilateral triangle has a side of 9, find its area.

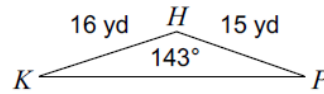
Use the Law of Cosines to find the missing side length. $c^2 = a^2 + b^2 - 2ab \cos C$

22) Find QR



- A) 32.9 ft B) 31.7 ft
C) 38.3 ft D) 34.6 ft

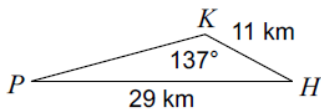
23) Find KP



- A) 29.4 yd B) 31.2 yd
C) 27.6 yd D) 32.5 yd

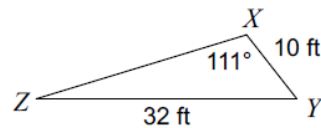
Use the Law of Sines to find the missing angles and side lengths. $\frac{\sin(A)}{a} = \frac{\sin(B)}{b}$

24) Find $m\angle P$



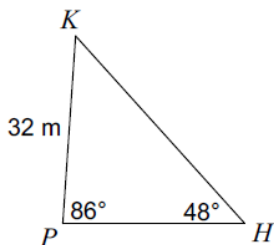
- A) 11° B) 9°
C) 15° D) 16°

25) Find $m\angle Z$



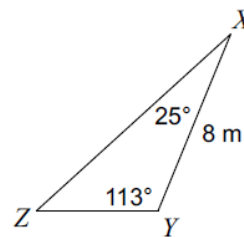
- A) 12° B) 20°
C) 16° D) 17°

26) Find HK



- A) 42 m B) 46 m
C) 43 m D) 44 m

27) Find XZ

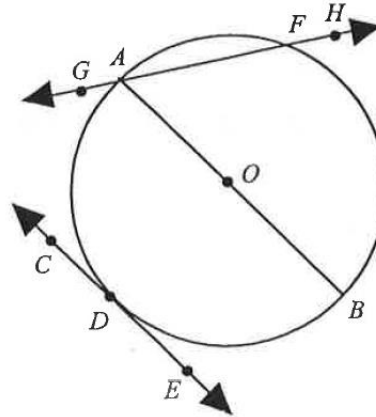


- A) 13 m B) 14 m
C) 11 m D) 10 m

Unit 7: Circles

28) What is the best name for \overleftrightarrow{CD} ?

- A) Chord
- B) Secant
- C) Tangent
- D) Diameter



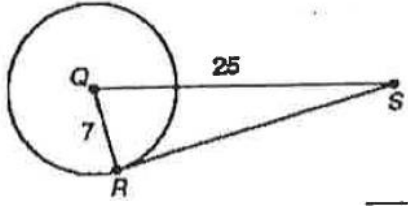
29) What is the best name for \overleftrightarrow{GH} ?

- A) Chord
- B) Secant
- C) Tangent
- D) Diameter

29) What is the best name for \overline{AB} ?

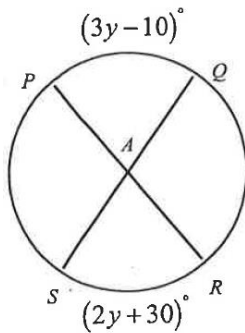
- A) Chord
- B) Secant
- C) Tangent
- D) Diameter

30) Find the length of RS.

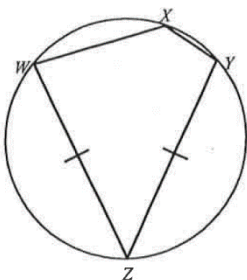


31) Find the $m\widehat{PQ}$

- A) 40°
- B) 50°
- C) 110°
- D) 120°

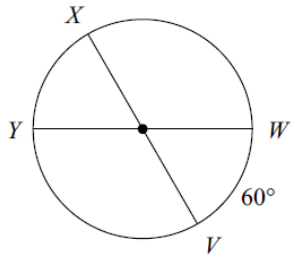


32) Given the measure of angle X = 130° , find the measure of angle Z.



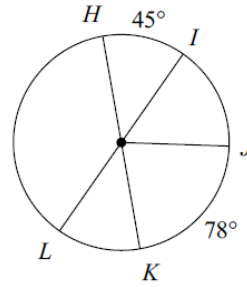
Find the measure of each arc.

33) $m\widehat{VY}$



- A) 97° B) 144°
 C) 66° D) 120°

34) $m\widehat{IK}$



Use the information provided to write the equation of each circle.

35) Center: $(-11, -11)$
 Radius: 4

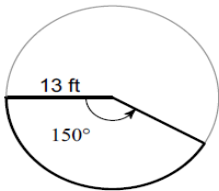
- A) $(x + 11)^2 + (y + 11)^2 = 256$
 B) $(x - 11)^2 + (y + 11)^2 = 16$
 C) $(x + 11)^2 + (y + 11)^2 = 16$
 D) $(x - 11)^2 + (y + 11)^2 = 9$

36) Center: $(-2, 8)$
 Radius: 4

- A) $(x + 8)^2 + (y + 3)^2 = 9$
 B) $(x + 2)^2 + (y - 8)^2 = 16$
 C) $(x + 8)^2 + (y - 2)^2 = 16$
 D) $(x - 8)^2 + (y - 2)^2 = 16$

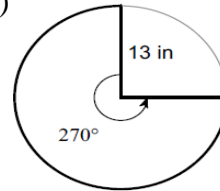
Find the area of each sector.

37)



- A) $26\pi \text{ ft}^2$ B) $\frac{65\pi}{6} \text{ ft}^2$
 C) $\frac{63\pi}{4} \text{ ft}^2$ D) $\frac{845\pi}{12} \text{ ft}^2$

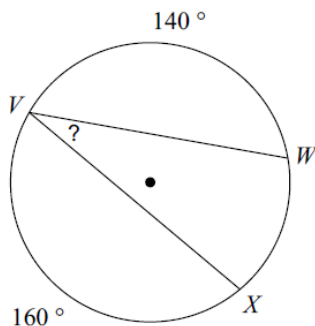
38)



- A) $\frac{26\pi}{3} \text{ in}^2$ B) $\frac{5\pi}{6} \text{ in}^2$
 C) $\frac{39\pi}{2} \text{ in}^2$ D) $\frac{507\pi}{4} \text{ in}^2$

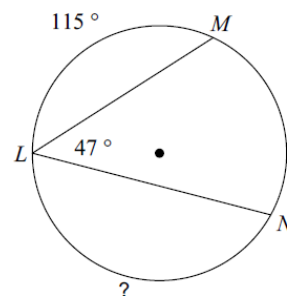
Find the measure of the indicated arc or angle.

39)



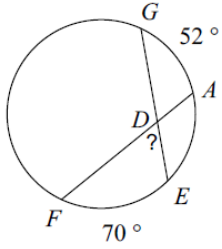
- A) 45° B) 30°
 C) 32° D) 27°

40)



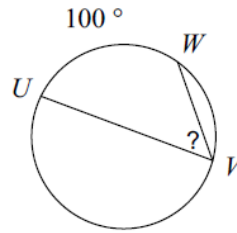
- A) 151° B) 127°
 C) 91° D) 94°

41)



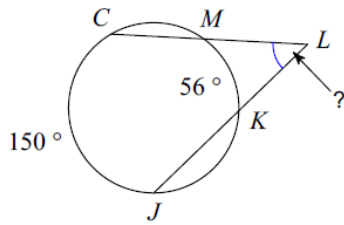
- A) 61° B) 43°
 C) 36° D) 46°

42)



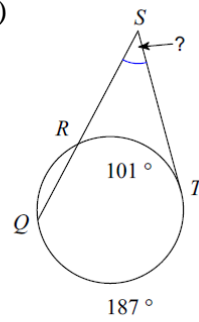
- A) 50° B) 75°
 C) 45° D) 32°

43)



- A) 67° B) 35°
 C) 47° D) 63°

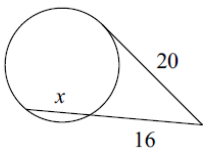
44)



- A) 64° B) 34°
 C) 43° D) 38°

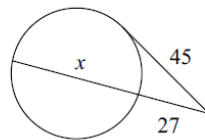
Find the value of x.

45)



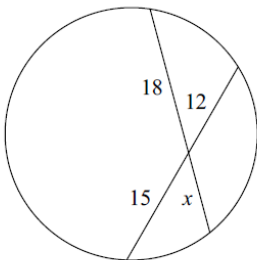
- A) 9 B) 13
 C) 11 D) 6

46)



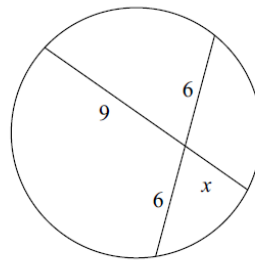
- A) 51 B) 48
 C) 50 D) 52

47)



- A) 7 B) 14
 C) 8 D) 10

48)

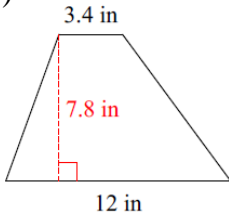


- A) 7 B) 6
 C) 4 D) 3

Unit 8: Area, Surface Area, and Volume

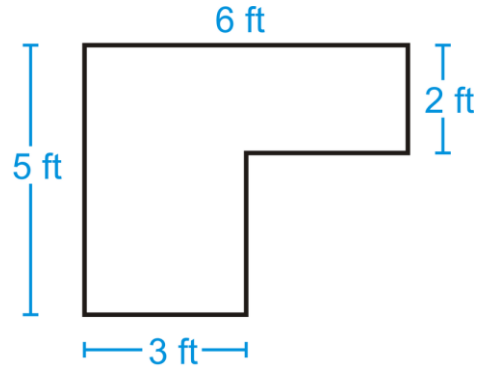
Find the area of each figure.

49)

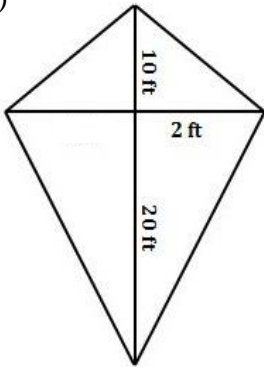


- A) 60.06 in^2
- B) 30 in^2
- C) 65.16 in^2
- D) 120.12 in^2

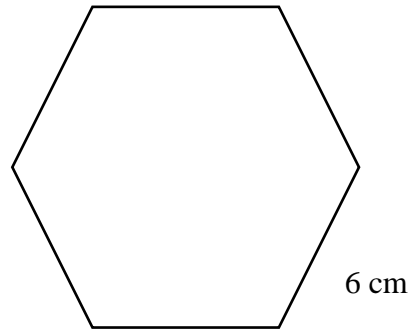
50)



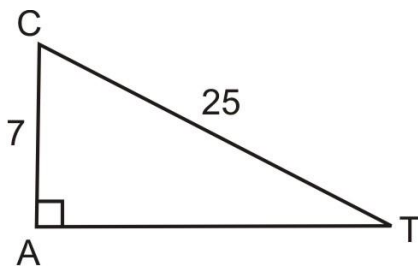
51)



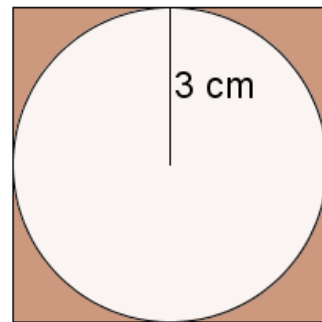
52)



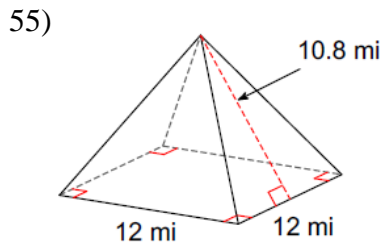
53) Find the area of the triangle.



54) Find the area of the shaded region.

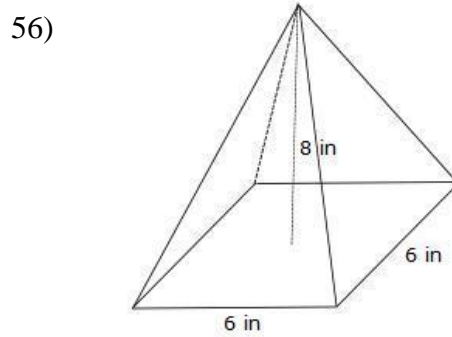


Find the lateral area of the square pyramid.

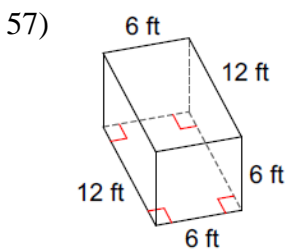


- A) 295.2 mi^2 B) 225.2 mi^2
 C) 259.2 mi^2 D) 270.7 mi^2

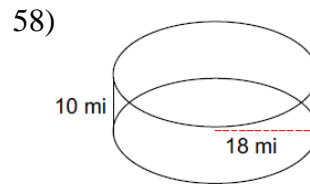
Find the surface area of the pyramid.



Find the surface area of the prism and cylinder.

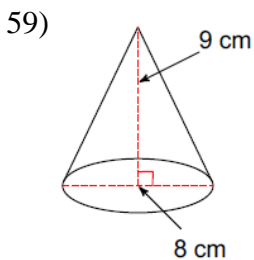


- A) 288 ft^2 B) 371 ft^2
 C) 213 ft^2 D) 360 ft^2

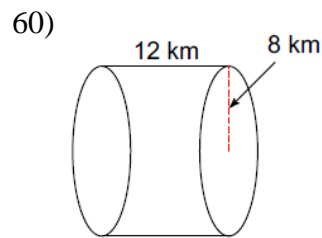


- A) $1008\pi \text{ mi}^2$ B) $1363\pi \text{ mi}^2$
 C) $1102\pi \text{ mi}^2$ D) $1287\pi \text{ mi}^2$

Find the volume of each figure.

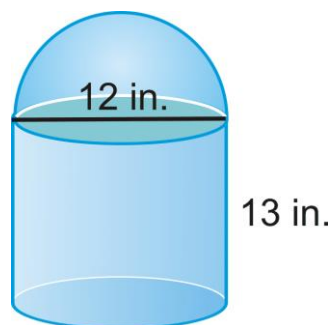


- A) $48\pi \text{ cm}^3$ B) $51\pi \text{ cm}^3$
 C) $30\pi \text{ cm}^3$ D) $192\pi \text{ cm}^3$



- A) $504\pi \text{ km}^3$ B) $768\pi \text{ km}^3$
 C) $860\pi \text{ km}^3$ D) $887\pi \text{ km}^3$

61) Find the volume of the composite figure.



62) Find the height of the cone given its volume is $64\pi \text{ cm}^3$ and radius is 6.

63) Find the radius of a sphere that has a surface area of $120\pi \text{ m}^2$.

64) Define a polyhedron and give an example of one.

65) What is the perpendicular cross section of a cone?

Unit 9: Probability

66) A coin is flipped 5 times. What is the probability that the result is heads all 5 times?

67) Two number cubes are rolled at the same time. What is the probability that the sum of the two cubes is 3 or 10?

68) You have a standard deck of 52 cards. If you draw two cards with replacement, what is the approximate probability of drawing a 10 then a queen?

69) The table shows the results of randomly selected car insurance quotes for 125 cars made by an insurance company in one week. What is the probability that a car chosen at random from this group is a teen with 0 accidents?

	Teen	Adult
0 accidents	15	53
1 accident	4	32
2+ accidents	9	12

70) Find the probability of a randomly selected point is in the square.

