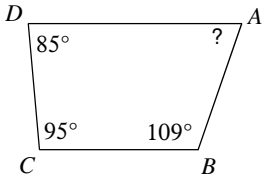
2nd Semester Final Review 2014

Date_____ Period____

Find the measure of each angle indicated.

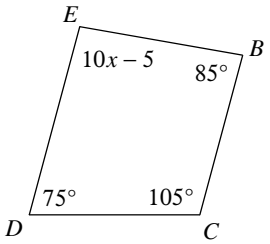
1)



A) 90° B) 115°
C) 71° D) 35°

Solve for *x*.

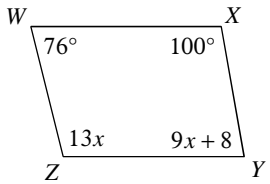
2)



A) 9 B) 8
C) 10 D) 7

Find the measure of each angle indicated.

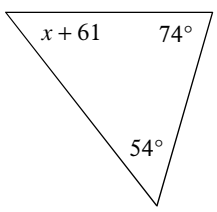
3) $m\angle Z$



A) 104° B) 50°
C) 115° D) 35°

Solve for *x*.

4)



A) 5 B) 9
C) −9 D) 8

State if the three numbers can be the measures of the sides of a triangle.

5) 21, 12, 11

A) Yes B) No

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

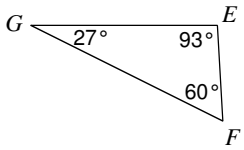
6) 8, 7

A) $5 < x < 15$ B) $1 < x < 14$

C) $3 < x < 15$ D) $1 < x < 15$

Order the sides of each triangle from shortest to longest.

7)



A) $\overline{FG}, \overline{EG}, \overline{EF}$

B) $\overline{EF}, \overline{FG}, \overline{EG}$

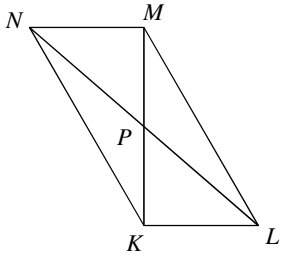
C) $\overline{EF}, \overline{EG}, \overline{FG}$

D) $\overline{EG}, \overline{FG}, \overline{EF}$

Solve for x. Each figure is a parallelogram.

8) $MP = 19$

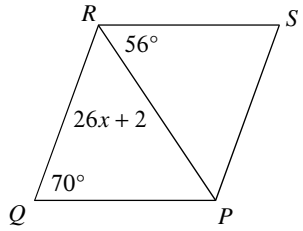
$PK = -2 + 3x$



A) 7 B) 1

C) 5 D) 4

9)

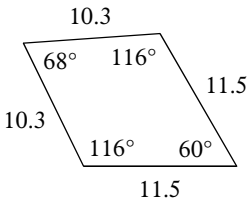


A) 4 B) 8

C) 2 D) 3

State the most specific name for each figure.

10)



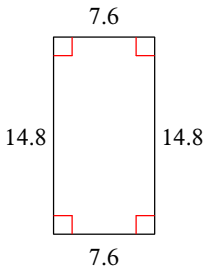
A) quadrilateral

B) trapezoid

C) kite

D) isosceles trapezoid

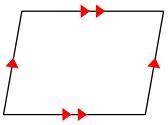
11)



A) quadrilateral B) trapezoid

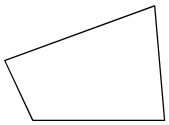
C) rectangle D) kite

12)



A) trapezoid
B) kite
C) parallelogram
D) quadrilateral

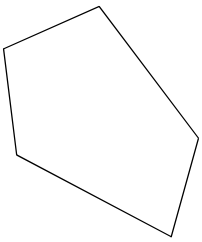
13)



A) isosceles trapezoid
B) kite
C) trapezoid
D) quadrilateral

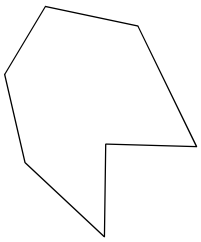
State if each polygon is concave or convex.

14)



A) concave B) convex

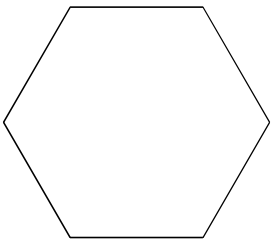
15)



A) concave B) convex

Find the measure of one interior angle in each polygon. Round your answer to the nearest tenth if necessary.

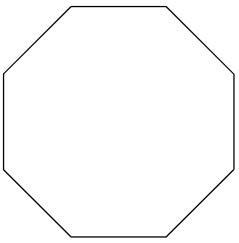
16)



A) 144° B) 90°
C) 135° D) 120°

Find the measure of one exterior angle in each polygon. Round your answer to the nearest tenth if necessary.

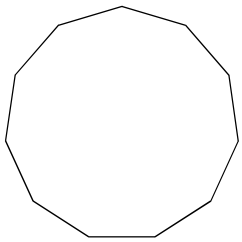
17)



A) 72° B) 45°
C) 90° D) 40°

Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

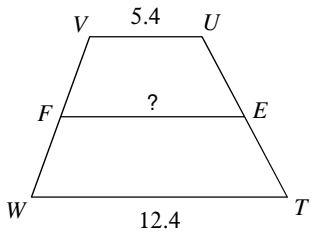
18)



A) 900° B) 1620°
C) 2340° D) 1800°

Find the length of the median of each trapezoid.

19)



A) 12.2 B) 12.4
C) 5.5 D) 8.9

Solve each proportion.

20) $\frac{r}{5} = \frac{10}{6}$

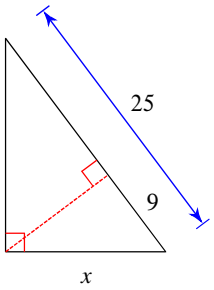
A) {4.4} B) {8.33}
C) {2} D) {6}

21) $\frac{7}{5} = \frac{6}{x-5}$

A) {−2} B) {3}
C) {4.2} D) {9.28}

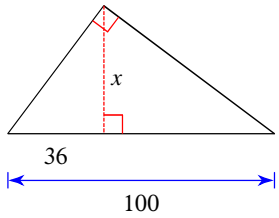
Find the missing length indicated. Leave your answer in simplest radical form.

22)



A) 15 B) 20
C) 16 D) 48

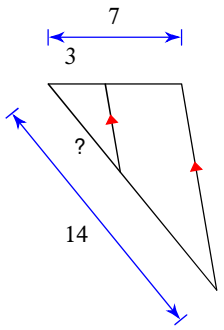
23)



A) 80 B) 48
C) 36 D) 64

Find the missing length indicated.

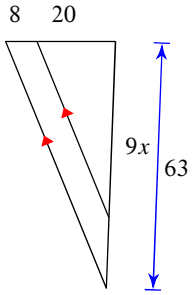
24)



A) 15 B) 10
C) 6 D) 9

Solve for *x*.

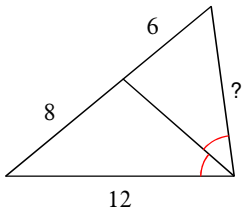
25)



A) 10 B) 4
C) 5 D) 7

Find the missing length indicated.

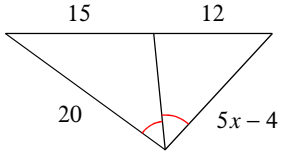
26)



A) 25 B) 3
C) 9 D) 15

Solve for *x*.

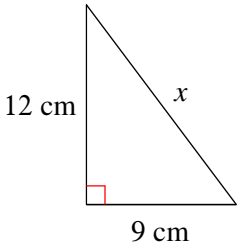
27)



A) 4 B) 3
C) 7 D) 9

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

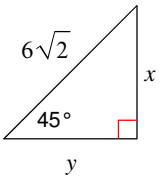
28)



A) 19 cm B) 15 cm
C) 8 cm D) 17 cm

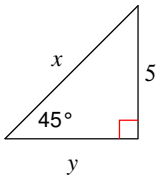
Find the missing side lengths. Leave your answers as radicals in simplest form.

29)



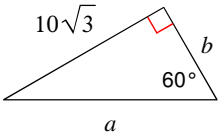
A) $x = 3,\ y = 3$
B) $x = 6\sqrt{3},\ y = 6\sqrt{3}$
C) $x = 6,\ y = 6$
D) $x = 2\sqrt{3},\ y = 2\sqrt{3}$

30)



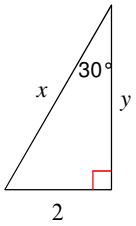
A) $x = 5\sqrt{2},\ y = \frac{5\sqrt{2}}{2}$
B) $x = 5\sqrt{2},\ y = 5$
C) $x = \frac{5\sqrt{6}}{2},\ y = \frac{5\sqrt{2}}{2}$
D) $x = \frac{5\sqrt{2}}{2},\ y = 5\sqrt{2}$

31)



A) $a = \frac{40\sqrt{3}}{3},\ b = 5\sqrt{3}$
B) $a = \frac{40\sqrt{3}}{3},\ b = 10$
C) $a = 20,\ b = 10$
D) $a = 5\sqrt{3},\ b = 20$

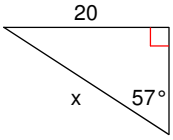
32)



A) $x = 8,\ y = \sqrt{6}$
B) $x = 4,\ y = 2\sqrt{3}$
C) $x = 2\sqrt{3},\ y = 8$
D) $x = \sqrt{6},\ y = 8$

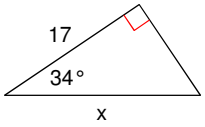
Find the missing side. Round to the nearest tenth.

33)



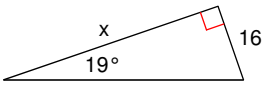
A) 16.8 B) 14.4
C) 23.8 D) 24.9

34)



A) 14.1 B) 20.5
C) 26.6 D) 18.9

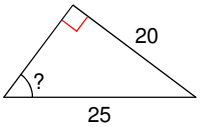
35)



A) 64.5 B) 5.5
C) 26.1 D) 46.5

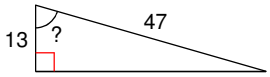
Find the measure of the indicated angle to the nearest degree.

36)



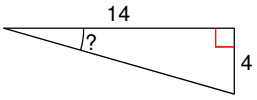
A) 51° B) 53°
C) 20° D) 39°

37)



A) 81° B) 74°
C) 16° D) 75°

38)



A) 73° B) 74°
C) 7° D) 16°

Find the value of each trigonometric ratio to the nearest ten-thousandth.

39) sin 76°

A) 0.9703 B) 0.1774
C) -0.0175 D) 57.2987

40) cos 88°

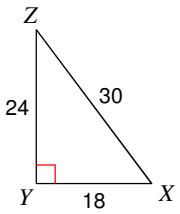
A) 0.0349 B) 0.3127
C) -0.9998 D) -0.0175

41) tan 67°

A) -57.2900 B) -1.0002
C) 0.0175 D) 2.3559

Find the value of each trigonometric ratio.

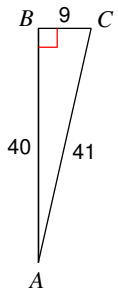
42) cos X



A) $\frac{3}{5}$ B) $\frac{4}{5}$

C) $\frac{5}{4}$ D) $\frac{3}{4}$

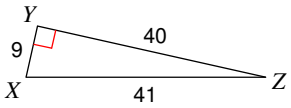
43) sin C



A) $\frac{41}{40}$ B) $\frac{9}{41}$

C) $\frac{40}{41}$ D) $\frac{40}{9}$

44) tan X

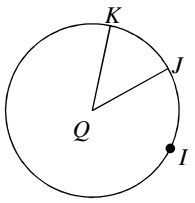


A) $\frac{40}{9}$ B) $\frac{40}{41}$

C) $\frac{9}{40}$ D) $\frac{9}{41}$

Name the arc made by the given angle.

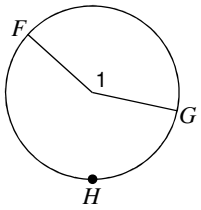
45) $\angle KQJ$



A) $\overset{\frown}{KIJ}$ B) $\overset{\frown}{KJ}$

Name the central angle of the given arc.

46) $\overset{\frown}{FG}$



A) Not enough information
B) $\angle 1$

Find each angle measure to the nearest degree.

47) sin W = 0.7986

A) 1° B) 63°
C) 15° D) 53°

48) cos W = 0.9563

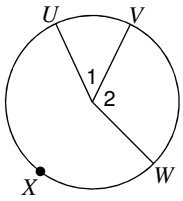
A) 1° B) 25°
C) 16° D) 17°

49) tan U = 4.7046

A) 46° B) 88°
C) 78° D) 17°

Name the arc made by the given angle.

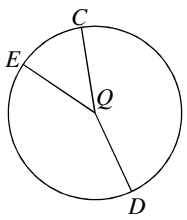
50) $\angle 2$



A) $\overset{\frown}{VXW}$ B) $\overset{\frown}{UWV}$
C) $\overset{\frown}{VW}$ D) $\overset{\frown}{UV}$

Name the central angle of the given arc.

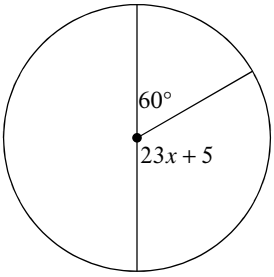
51) $\overset{\frown}{CE}$



A) $\angle CQD$ B) $\angle DQE$
C) $\angle CQE$

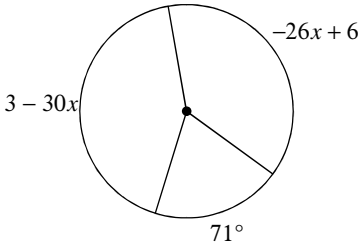
Solve for x. Assume that lines which appear to be diameters are actual diameters.

52)



A) −10 B) 5
C) 8 D) −4

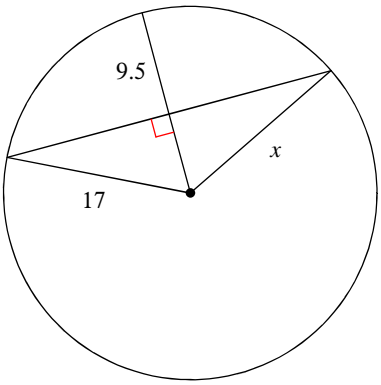
53)



A) 4 B) 8
C) −5 D) −7

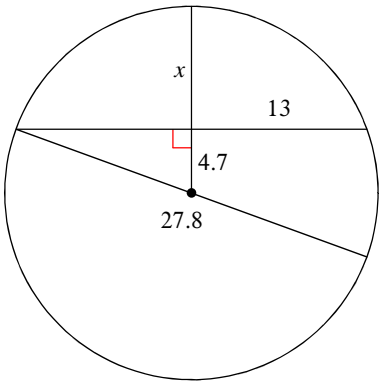
Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.

54)



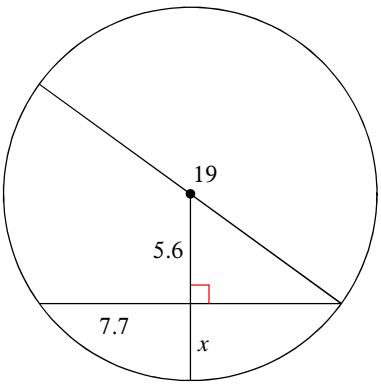
A) 17.2 B) 22.3
C) 17 D) 16.5

55)



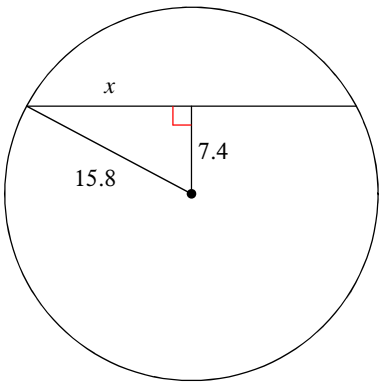
A) 9.2 B) 7.3
C) 6.7 D) 12.2

56)



A) 3.9 B) 4.1
C) 2.2 D) 5

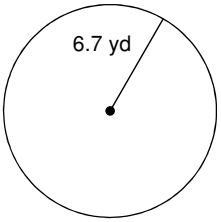
57)



A) 15.6 B) 15
C) 10.6 D) 14

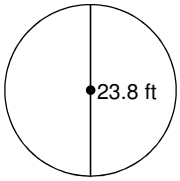
Find the area of each. Use your calculator's value of π. Round your answer to the nearest tenth.

58)



A) 8919.9 yd²
B) 41.9 yd²
C) 141 yd²
D) 167.4 yd²

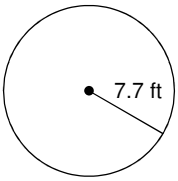
59)



A) 444.9 ft²
B) 539.1 ft²
C) 467.6 ft²
D) 41.2 ft²

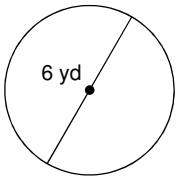
Find the circumference of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

60)



A) 52.2 ft
B) 48.4 ft
C) 56.6 ft
D) 60.4 ft

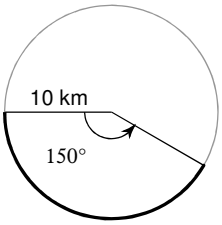
61)



A) 21.9 yd
B) 25.7 yd
C) 18.8 yd
D) 51.4 yd

Find the length of each arc. Round your answers to the nearest tenth.

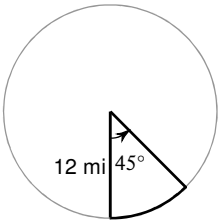
62)



A) 132.7 km
B) 26.2 km
C) 75.7 km
D) 25.1 km

Find the area of each sector. Round your answers to the nearest tenth.

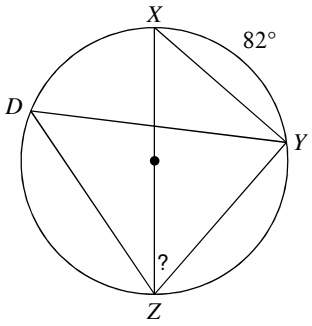
63)



A) 418.9 mi²
B) 3.9 mi²
C) 56.5 mi²
D) 2.6 mi²

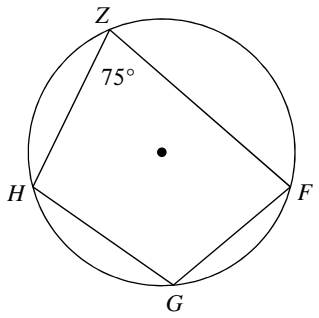
Find the measure of the arc or angle indicated.

64)



A) 36° B) 52°
C) 55° D) 41°

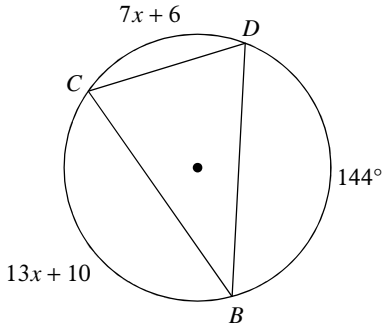
65) Find $m\widehat{FH}$



A) 136° B) 112°
C) 150° D) 181°

Solve for x.

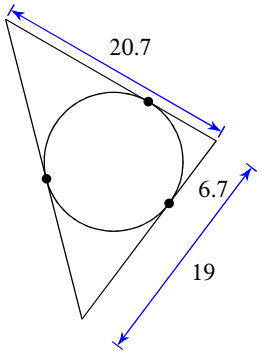
66)



A) 13 B) 4
C) 11 D) 10

Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

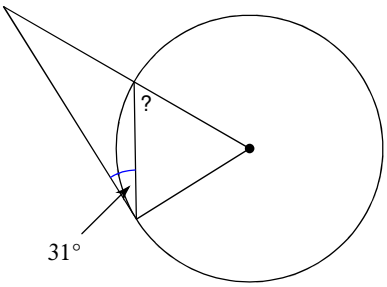
67)



A) 66 B) 70.5
C) 48 D) 52

Find the angle measure indicated. Assume that lines which appear to be tangent are tangent.

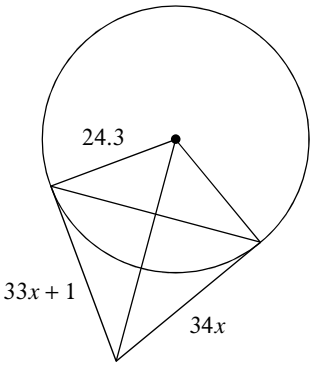
68)



A) 36° B) 59°
C) 31° D) 33°

Solve for x. Assume that lines which appear to be tangent are tangent.

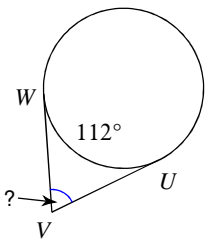
69)



A) 3 B) 1
C) 10 D) 9

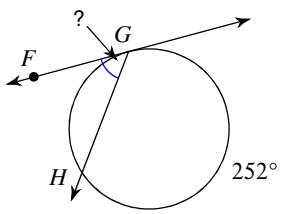
Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

70)



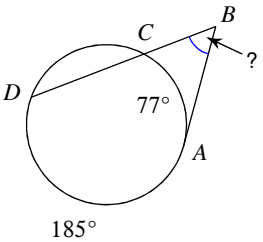
A) 87° B) 84°
C) 68° D) 47°

71)



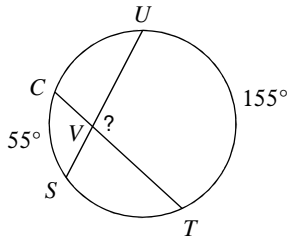
A) 47° B) 44°
C) 52° D) 54°

72)



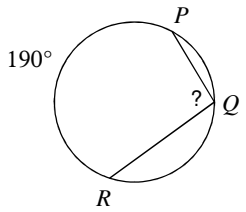
A) 36° B) 76°
C) 41° D) 54°

73)



A) 115° B) 140°
C) 150° D) 105°

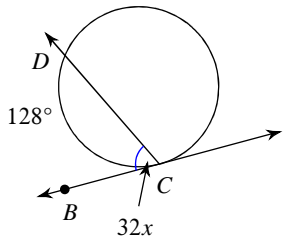
74)



A) 105° B) 115°
C) 95° D) 125°

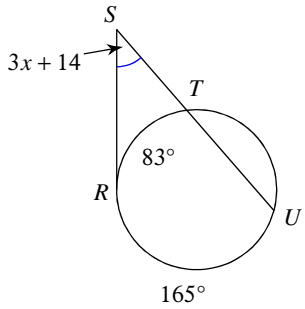
Solve for *x*. Assume that lines which appear tangent are tangent.

75)



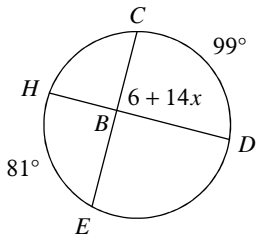
A) 9 B) 12
C) 11 D) 2

76)



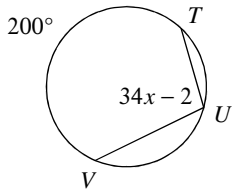
A) 3 B) 4
C) 7 D) 9

77)



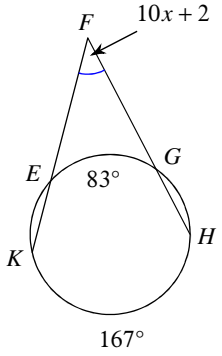
A) 6 B) 4
C) 11 D) 5

78)



A) 8 B) 5
C) 0 D) 3

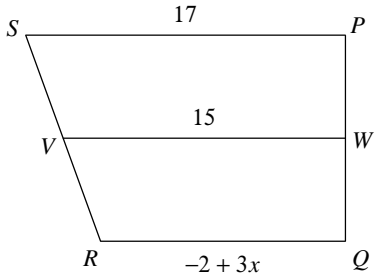
79)



A) 12 B) 4
C) 1 D) 6

Solve for x. Each figure is a trapezoid.

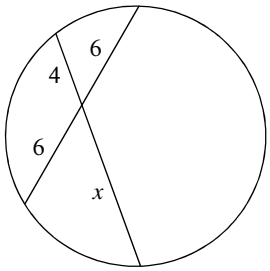
80)



A) 8 B) 12
C) 5 D) 10

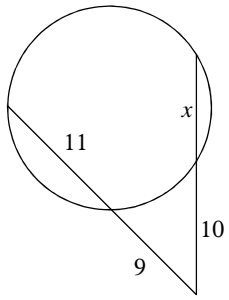
Solve for x. Assume that lines which appear tangent are tangent.

81)



A) 9 B) 12
C) 5 D) 6

82)



A) 7 B) 8
C) 5 D) 9

Simplify.

83) $\sqrt{54}$

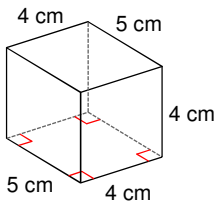
A) 8 B) $3\sqrt{3}$
C) $4\sqrt{2}$ D) $3\sqrt{6}$

84) $\sqrt{150}$

A) $5\sqrt{6}$ B) $7\sqrt{5}$
C) $2\sqrt{5}$ D) $7\sqrt{6}$

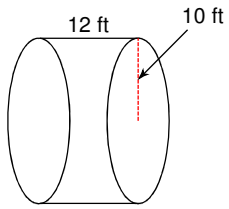
Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

85)



A) 114 cm³ B) 53 cm³
C) 70 cm³ D) 80 cm³

86)



A) 2819.19 ft³ B) 3769.91 ft³
C) 5185.54 ft³ D) 5036.41 ft³

Answers to 2nd Semester Final Review 2014

1) C
2) C
3) A
4) C
5) A
6) D
7) C
8) A
9) C
10) C
11) C
12) C
13) D
14) B
15) A
16) D
17) B
18) B
19) D
20) B
21) D
22) A
23) B
24) C
25) C
26) C
27) A
28) B
29) C
30) B
31) C
32) B
33) C
34) B
35) D
36) B
37) B
38) D
39) A
40) A
41) D
42) A
43) C
44) A
45) B
46) B
47) D
48) D
49) C
50) C
51) C
52) B
53) C
54) C
55) A
56) A
57) D
58) C
59) A
60) B
61) C
62) B
63) C
64) D
65) C
66) D
67) A
68) B
69) B
70) C
71) D
72) D
73) D
74) C
75) D
76) D
77) A
78) D
79) B
80) C
81) A
82) B
83) D
84) A
85) D
86) B