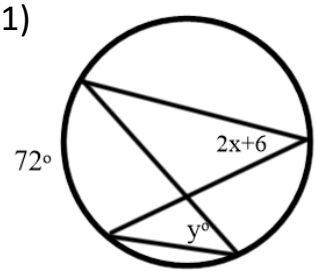
Name_____

Math 2C
Unit 2 Practice Test

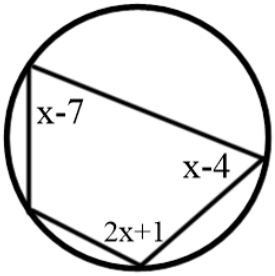
Solve for the given variable.

1)



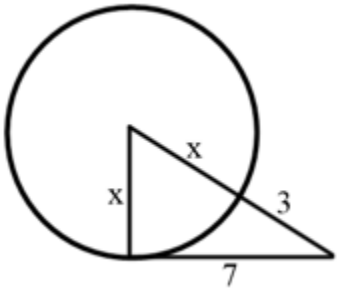
A) $x=15,\ y=15^\circ$
B) $x=33,\ y=36^\circ$
C) $x=33,\ y=33^\circ$
D) $x=15,\ y=36^\circ$

2)



A) 62
B) -8
C) 61
D) 32

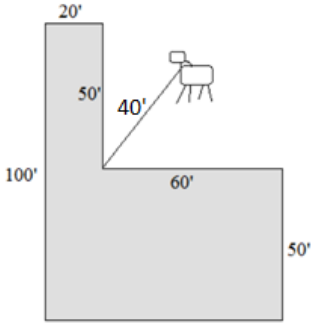
3)



A) 3.2
B) 6.7
C) 6.3
D) 4

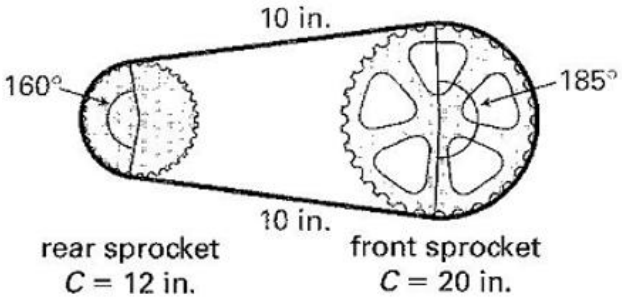
4) A cow is tethered to a 40-foot rope, attached to the inside corner of an L-shaped building (as shown in the diagram). Find the grazing area of the cow.

A) $62.8\ ft^2$
B) $5027\ ft^2$
C) $734\ ft^2$
D) $1257\ ft^2$



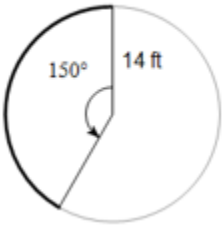
5) The chain of a bicycle travels along the front and rear sprockets, as shown. The circumference of each sprocket is given. About how long is the chain?

A) 39.3 in
B) 31.5 in
C) 35.6 in
D) 41.2 in



Find the length of the indicated arc.

6)



A) $\frac{245\pi}{3}\ ft$ B) $\frac{35\pi}{3}\ ft$

C) $\frac{21\pi}{2}\ ft$ D) $\frac{17\pi}{6}\ ft$

Find the area of the indicated sector.

7)

A) $\frac{125\pi}{2}\ in^2$ B) $\frac{845\pi}{6}\ in^2$

C) $\frac{25\pi}{2}\ in^2$ D) $15\pi\ in^2$

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

8) Center: $(-16,5)$ Radius: 2

A) $(x+4)^2+(y-14)^2=4$

B) $(x+16)^2+(y-5)^2=2$

C) $(x-5)^2+(y-16)^2=2$

D) $(x+16)^2+(y-5)^2=4$

9) Center $(2,-6)$, Area 51π

A) $(x-2)^2+(y+6)^2=51$

B) $(x+6)^2+(y+1)^2=2601$

C) $(x-2)^2+(y+6)^2=2601$

D) $(x+2)^2+(y+6)^2=51$

10) Center $(17,-4)$

Point on Circle $(17,-2)$

A) $(x-17)^2+(y+4)^2=1$

B) $(x-17)^2+(y-5)^2=4$

C) $(x-17)^2+(y+4)^2=16$

D) $(x-17)^2+(y+4)^2=4$

11) Center $(6,-10)$

Circumference: 14π

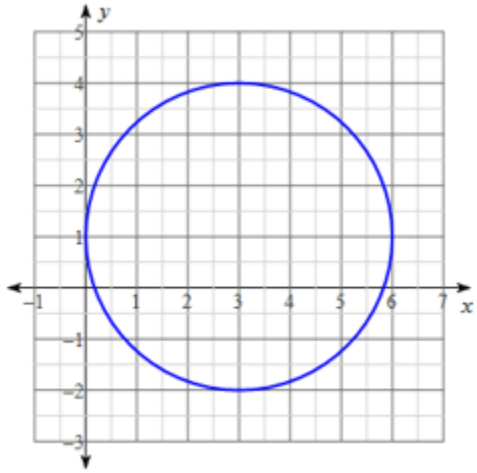
A) $(x-6)^2+(y-10)^2=49$

B) $(x-6)^2+(y+10)^2=49$

C) $(x-6)^2+(y+10)^2=2401$

D) $(x-10)^2+(y-5)^2=49$

12)



A) $(x-3)^2+(y-1)^2=9$

B) $(x-3)^2+(y-1)^2=3$

C) $(x-1)^2+(y+3)^2=9$

D) $(x+5)^2+(y+3)^2=3$

Write the equation in standard form for a circle.

13) $x^2+y^2-2x+26y+169=0$

A) $(x+1)^2+(y-13)^2=1$

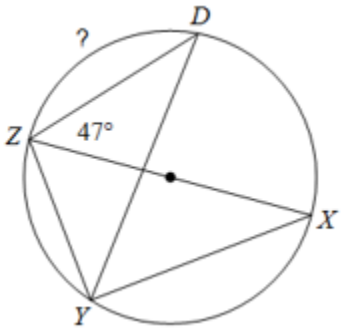
B) $(x-1)^2+(y+13)^2=1$

C) $(x-1)^2+(y+13)^2=4$

D) $(x-1)^2+(y+13)^2=9$

Find the measure of the arc or angle indicated.

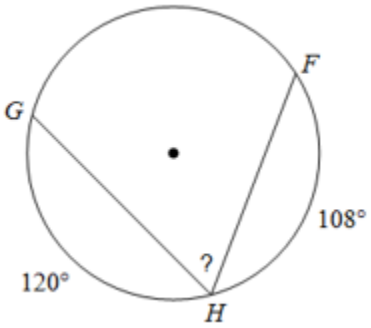
14)



A) 71° B) 62°

C) 86° D) 45°

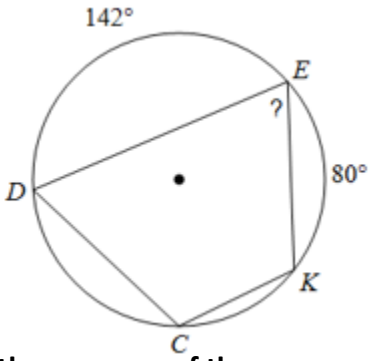
15)



A) 66° B) 92°

C) 80° D) 49°

16)



A) 69°

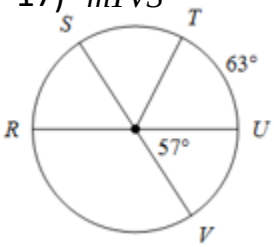
B) 85°

C) 48°

D) 78°

Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters. And lines that appear to be tangent are actually tangent.

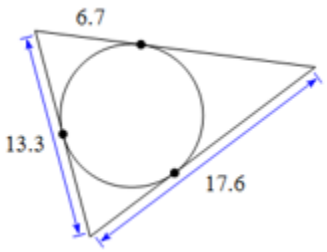
17) $mTVS$



A) 300° B) 37°

C) 38° D) 66°

18.

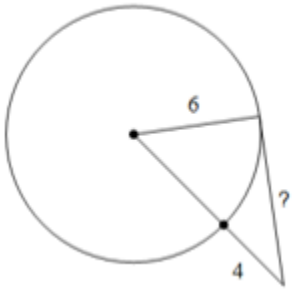


A) 38.3 B) 48.2

C) 48.6 D) 56.5

Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

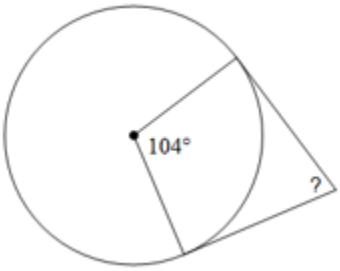
19)



A) 8.4
B) 8
C) 5.8
D) 9.4

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

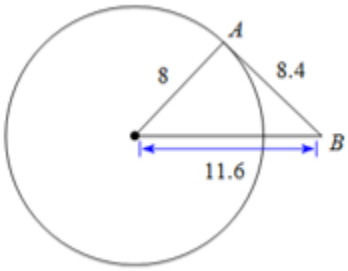
20)



A) 31°
B) 35°
C) 76°
D) 37°

Determine if the line *AB* is tangent to the circle.

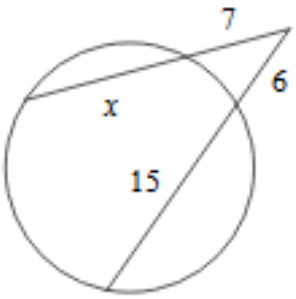
21)



A) Not Tangent
B) Tangent

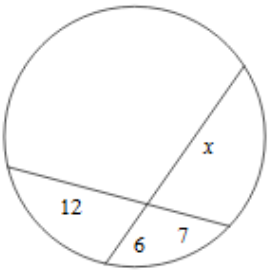
Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

22)



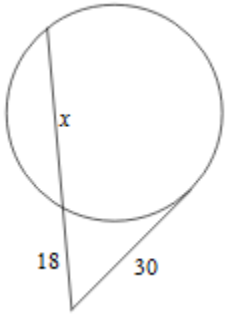
A) 13 B) 9
C) 12 D) 11

23)



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

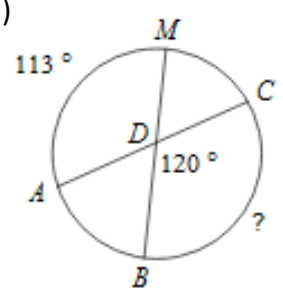
24)



A) 50 B) 32
C) 44 D) 37

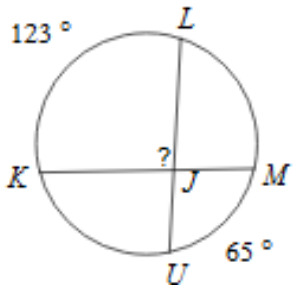
Find the angle measure indicated.

25)



A) 60° B) 113°
C) 120° D) 127°

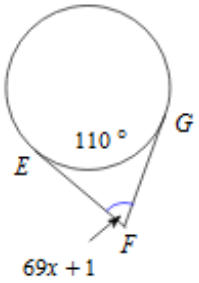
26)



A) 88° B) 29°
C) 123° D) 94°

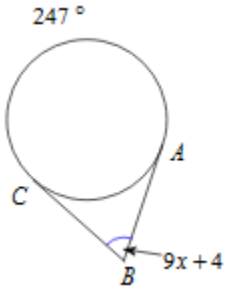
Solve for the missing variable. Assume that lines which appear to be tangent are tangent.

27)



A) 2 B) 3
C) 1 D) 5

28)



A) 7 B) 9
C) 14 D) 12

Answer Key

1. D
2. A
3. B
4. D
5. C
6. B
7. A
8. D
9. A
10. D
11. B
12. A
13. B
14. C
15. A
16. A
17. A
18. C
19. B
20. C
21. B
22. D
23. A
24. B
25. D
26. D
27. C
28. A