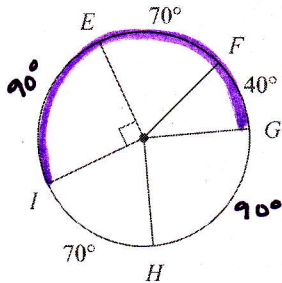


CIRCLES

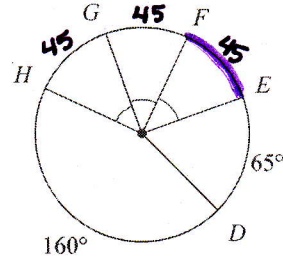
Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

1) $m\widehat{IEG} = 90 + 70 + 40 = 200^\circ$



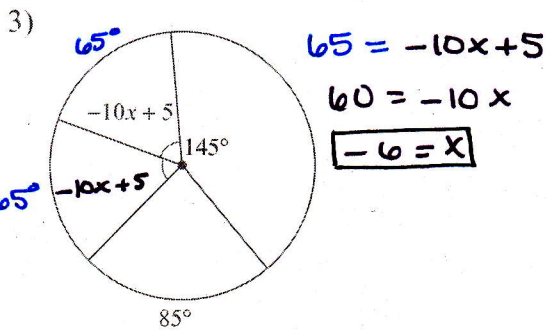
- *A) 200° B) 85°
C) 37° D) 96°

2) $m\widehat{FE}$

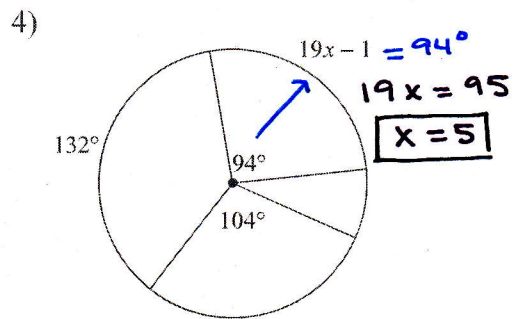


- A) 55° B) 61°
C) 66° *D) 45°

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



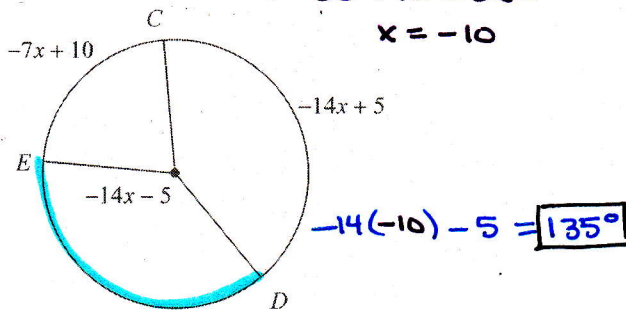
- A) -4 B) -2
C) 10 *D) -6



- A) -12 B) 10
*C) 5 D) 9

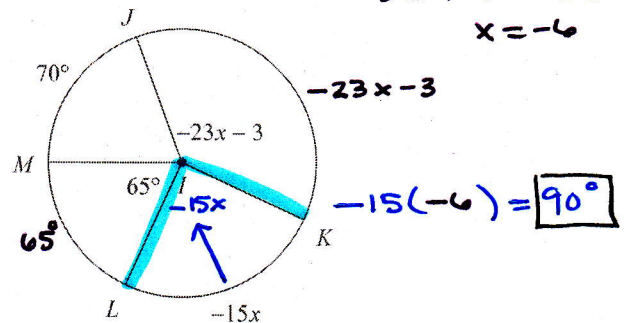
Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

5) $m\widehat{DE} \quad -7x + 10 - 14x + 5 - 14x - 5 = 360$
 $-35 + 10 = 360$
 $x = -10$



- A) 144° B) 132°
C) 140° *D) 135°

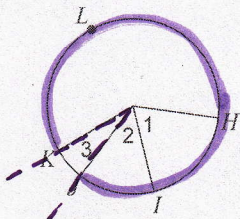
6) $m\angle KIL \quad 70 + 65 - 15x - 23x - 3 = 360$
 $-38 + 132 = 360$
 $x = -6$



- A) 95° *B) 90°
C) 89° D) 107°

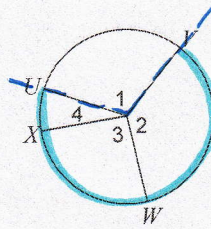
If an angle is given, name the arc it makes. If an arc is given, name its central angle.

7) Major arc for $\angle 3$



- A) \widehat{HI} *B) \widehat{JHK}
 C) \widehat{HKI} D) \widehat{IJ}

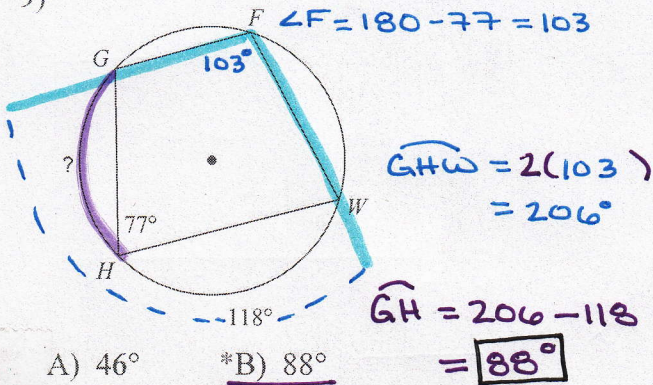
8) Major arc for $\angle 1$



- A) \widehat{UX} *B) \widehat{UWV}
 C) \widehat{VXW} D) \widehat{UV}

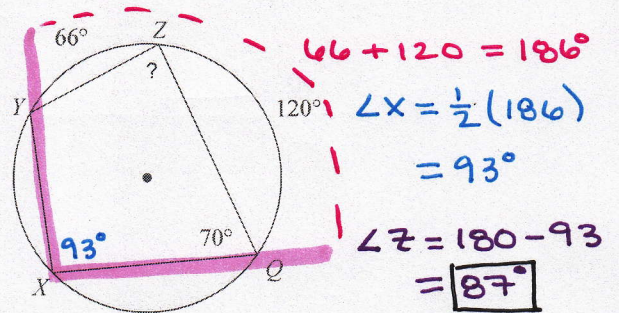
Find the measure of the arc or angle indicated.

9)



- A) 46° *B) 88°
 C) 85° D) 49°

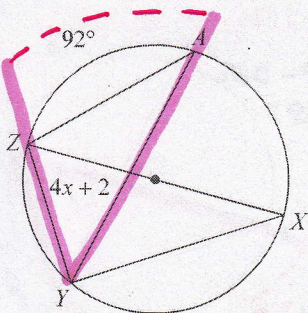
10)



- A) 107° B) 62°
 C) 59° *D) 87°

Solve for x.

11)



- A) 2 B) 6
 C) 4 *D) 11

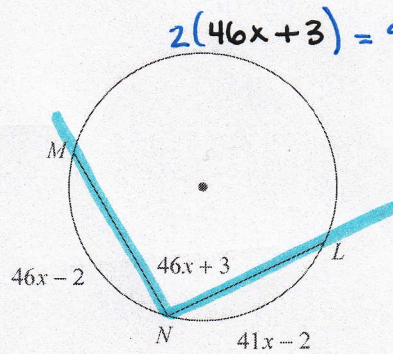
$$2(4x+2) = 92$$

$$8x+4 = 92$$

$$8x = 88$$

$$x = 11$$

12)



- A) 13 *B) 2
 C) 0 D) 14

$$2(46x+3) = 92x+6$$

$$92x+6+46x-2+41x-2=360$$

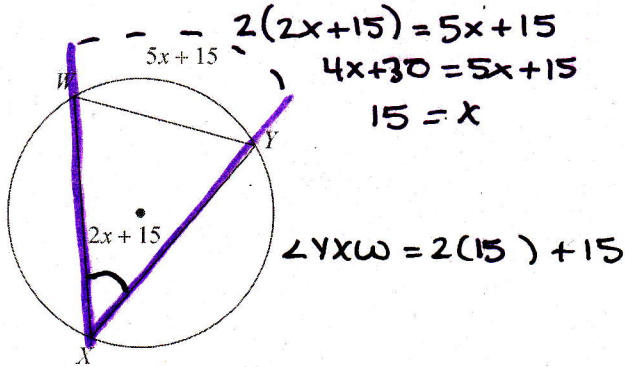
$$179x+2=360$$

$$179x=358$$

$$x=2$$

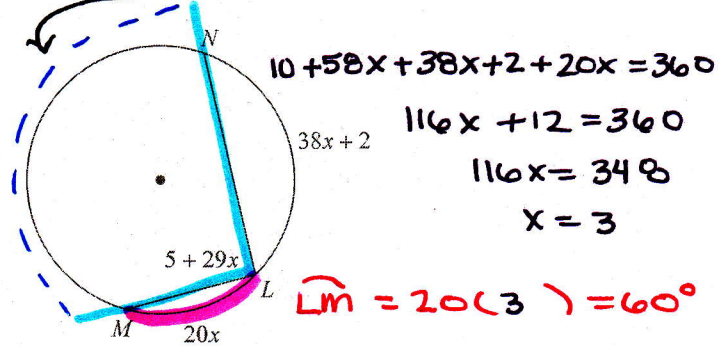
Find the measure of the arc or angle indicated.

13) Find $m\angle YXW$



- *A) 45° B) 56°
 C) 54° D) 25°

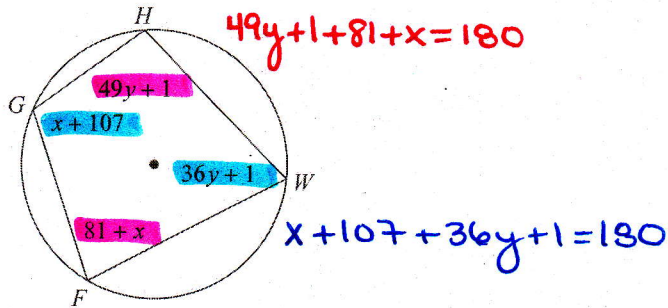
14) Find $m\widehat{LM}$ $2(5 + 29x) = 10 + 58x$



- A) 65° B) 56°
 *C) 60° D) 68°

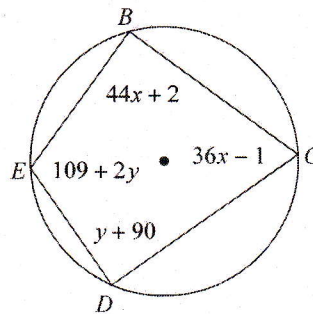
Solve for x and y .

15)



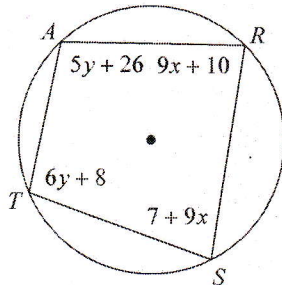
- A) $x = 6, y = 0$
 B) $x = 0, y = 4$
 *C) $x = 0, y = 2$
 D) $x = 11, y = 2$

16)



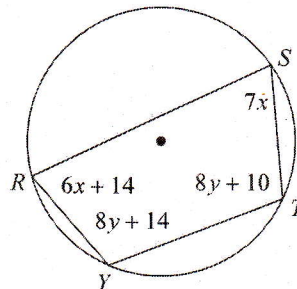
- A) $x = 7, y = 15$
 B) $x = 10, y = 6$
 *C) $x = 2, y = 0$
 D) $x = 12, y = 6$

17)



- A) $x = 5, y = 12$
 B) $x = 3, y = 9$
 *C) $x = 8, y = 15$
 D) $x = 12, y = 7$

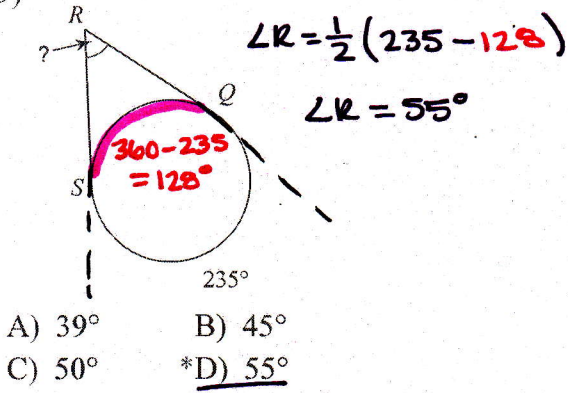
18)



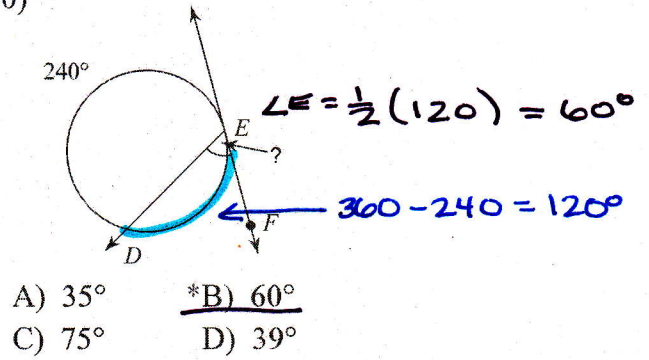
- A) $x = 8, y = 10$
 B) $x = 3, y = 4$
 *C) $x = 10, y = 12$
 D) $x = 3, y = 13$

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

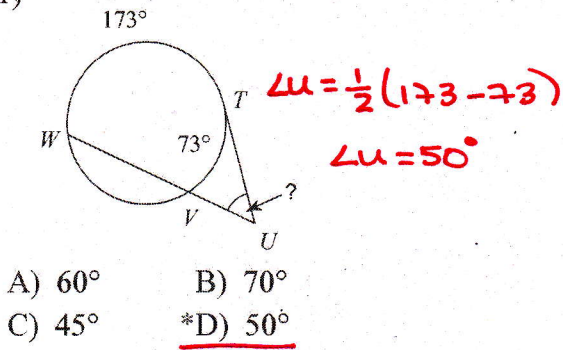
19)



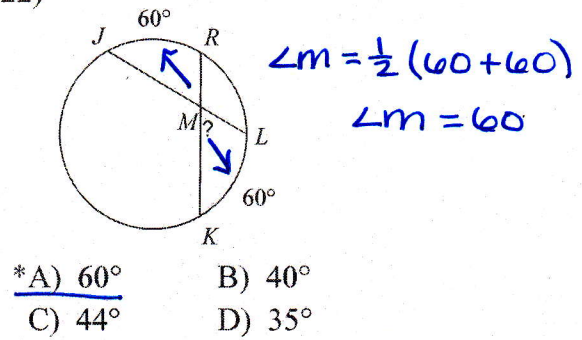
20)



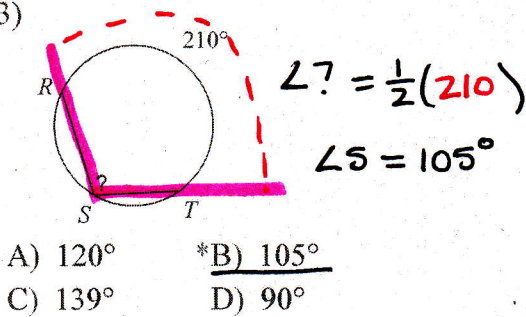
21)



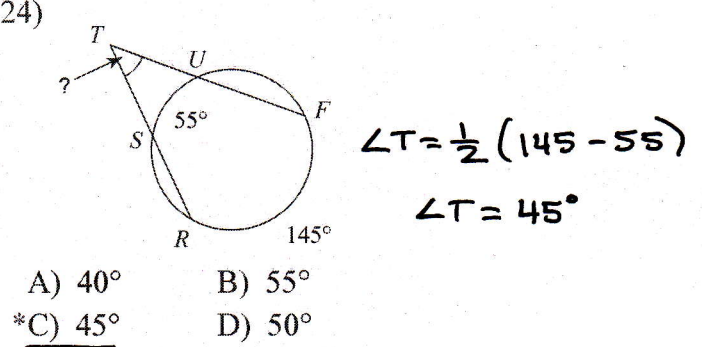
22)



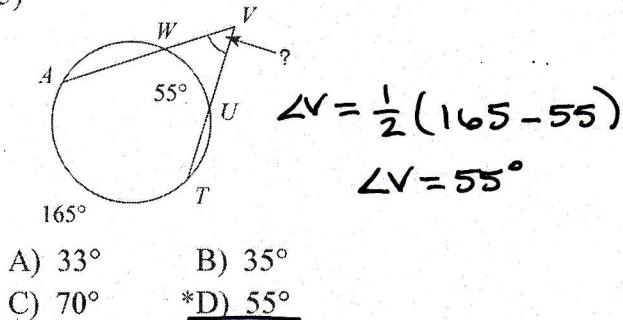
23)



24)

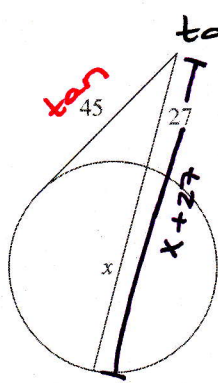


25)



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

26)



$\tan^2 = \text{whole} \cdot \text{outside}$

$45^2 = (x+27) \cdot 27$

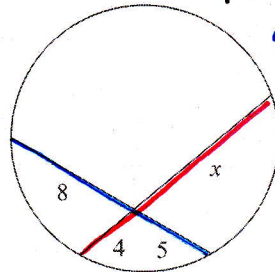
$2025 = 27x + 729$

$1296 = 27x$

$48 = x$

- A) 31 B) 45
C) 60 *D) 48

27)



$p_1 \cdot p_2 = p_1 \cdot p_2$

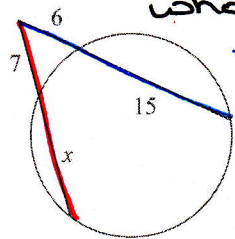
$8 \cdot 5 = 4 \cdot x$

$40 = 4x$

$10 = x$

- *A) 10 B) 8
C) 13 D) 6

28)



$\text{whole} \cdot \text{outside} = \text{whole} \cdot \text{outside}$

$21 \cdot 6 = (x+7) \cdot 7$

$126 = 7x + 49$

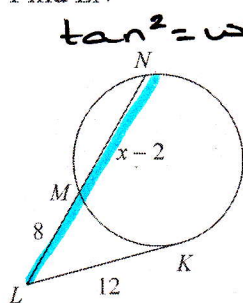
$77 = 7x$

$11 = x$

- A) 13 *B) 11
C) 15 D) 12

Find the measure of the line segment indicated. Assume that lines which appear tangent are tangent.

29) Find LN



$\tan^2 = \text{whole} \cdot \text{outside}$

- A) 21 *B) 18
C) 25 D) 24

$12^2 = (x+6) \cdot 8$

$144 = 8x + 48$

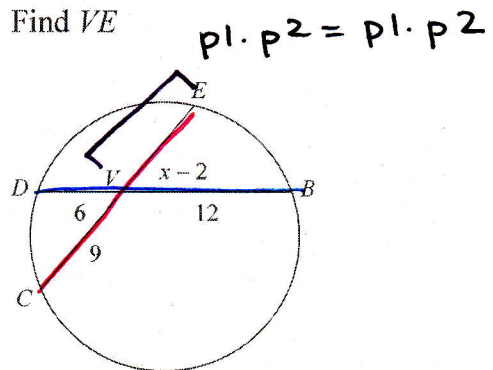
$96 = 8x$

$12 = x$

$LN = 8 + (12 - 2)$

$LN = 18$

30) Find VE



$p_1 \cdot p_2 = p_1 \cdot p_2$

- A) 11 B) 6
C) 5 *D) 8

$6 \cdot 12 = 9 \cdot (x-2)$

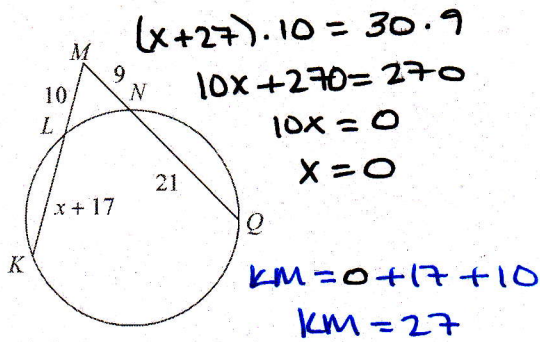
$72 = 9x - 18$

$90 = 9x$

$10 = x$

$VE = 10 - 2 = 8$

31) Find KM whole.out = whole.out



$$(x+27) \cdot 10 = 30 \cdot 9$$

$$10x + 270 = 270$$

$$10x = 0$$

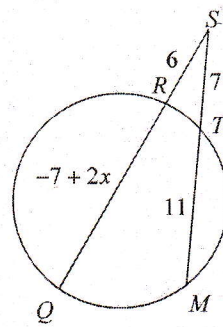
$$x = 0$$

$$KM = 0 + 17 + 10$$

$$KM = 27$$

- A) 32 *B) 27
C) 36 D) 30

32) Find QR whole.out = whole.out



$$(2x-1)6 = 18 \cdot 7$$

$$12x - 6 = 126$$

$$12x = 132$$

$$x = 11$$

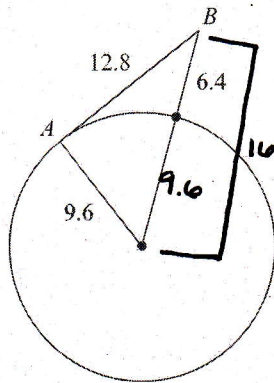
$$QR = -7 + 2(11)$$

$$QR = 15$$

- A) 13 *B) 15
C) 19 D) 18

Determine if line AB is tangent to the circle.

33)



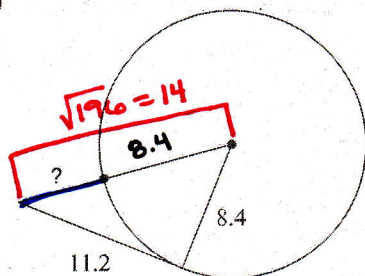
$$12.8^2 + 9.6^2 = 16^2$$

$$256 = 256 \checkmark$$

- *A) Tangent B) Not tangent

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

34)



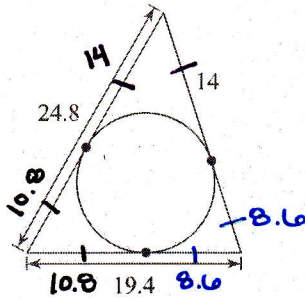
$$11.2^2 + 8.4^2 = 196$$

$$? = 14 - 8.4 = \boxed{5.6}$$

- A) 6.6 B) 5.7
C) 4.8 *D) 5.6

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

35)



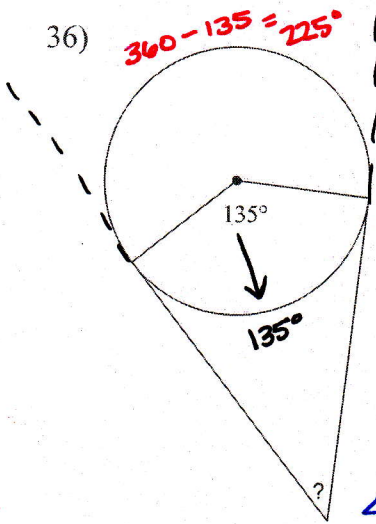
$$P = 24.8 + 19.4 + 14 + 8.6$$

$$P = 66.8$$

- A) 51.3 B) 48.4
 C) 75.2 *D) 66.8

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

36)



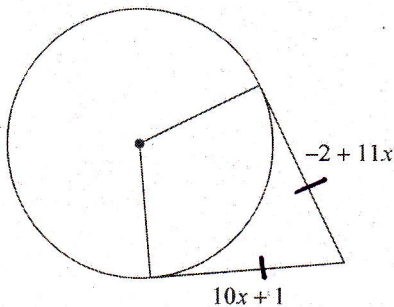
$$\angle ? = \frac{1}{2}(225 - 135)$$

$$\angle ? = 45^\circ$$

- *A) 45° B) 39°
 C) 27° D) 38°

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

37)

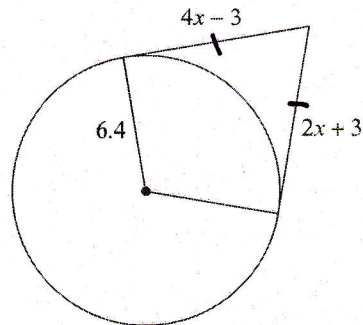


A) 11 B) 4
 C) 6 *D) 3

$$-2 + 11x = 10x + 1$$

$$x = 3$$

38)



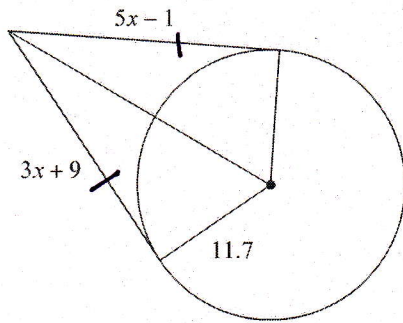
A) 6 B) 4 C) 3 D) 0

$$4x - 3 = 2x + 3$$

$$2x = 6$$

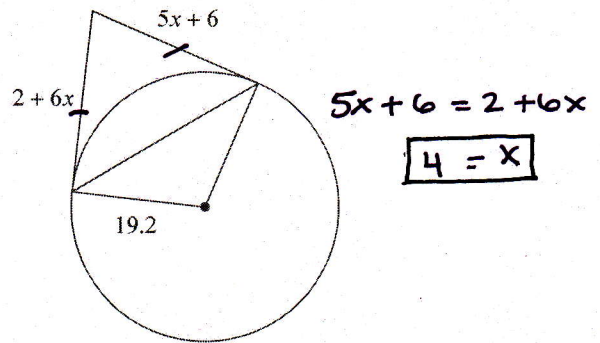
$$x = 3$$

39)



- A) 9 B) 11
 *C) 5 D) 3
- $5x-1 = 3x+9$
 $2x = 10$
 $x = 5$

40)



- *A) 4 B) 0
 C) 7 D) 2

$$5x+6 = 2+6x$$

$$\boxed{4 = x}$$

Use the information provided to write the equation of each circle. $(x-h)^2 + (y-k)^2 = r^2$

41) Center: $(12, -14)$

Radius: 1

- A) $(x-14)^2 + (y+14)^2 = 9$
 B) $(x+13)^2 + (y+13)^2 = 1$
 C) $(x+10)^2 + (y+16)^2 = 1$
 *D) $(x-12)^2 + (y+14)^2 = 1$

42) Center: $(3, -2)$

Radius: 7

- *A) $(x-3)^2 + (y+2)^2 = 49$
 B) $(x-2)^2 + (y+3)^2 = 2401$
 C) $(x-3)^2 + (y-2)^2 = 49$
 D) $(x+2)^2 + (y-2)^2 = 49$

Identify the center and radius of each.

43) $(x+1)^2 + (y-14)^2 = 19$

- A) Center: $(-1, -14)$
 Radius: $\sqrt{19}$
 B) Center: $(-1, 14)$
 Radius: 19
 C) Center: $(-14, 1)$
 Radius: $\sqrt{19}$
 *D) Center: $(-1, 14)$
 Radius: $\sqrt{19}$

44) $(x+12)^2 + (y+4)^2 = 38$

- A) Center: $(4, 12)$
 Radius: 1
 B) Center: $(-2, 10)$
 Radius: $\sqrt{38}$
 *C) Center: $(-12, -4)$
 Radius: $\sqrt{38}$
 D) Center: $(-12, -4)$
 Radius: 38