

Name:

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Chapter 10 Group Review

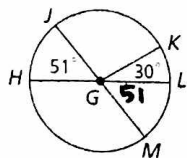
1. Find the measure of the following:

a. $m\widehat{HMK}$

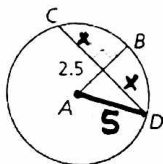
$$210^\circ$$

b. $m\widehat{MJK}$

$$279^\circ$$



2. Find the length of CD. Round to hundredth.



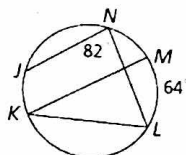
$$2.5^2 + x^2 = 5^2$$

$$x^2 = 18.75$$

$$x \approx 4.33$$

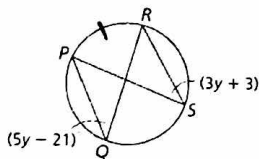
$$\rightarrow \boxed{CD \approx 8.66}$$

3. Find
- $m\angle MKL$
- .



$$\frac{1}{2}(64) = \boxed{32^\circ}$$

4. Find
- $m\widehat{PR}$
- .



$$5y - 21 = 3y + 3$$

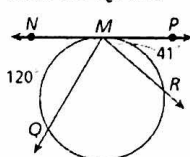
$$2y = 24$$

$$y = 12$$

$$m\angle PQR = 5(12) - 21 = 39$$

$$m\widehat{PR} = 2(39) = \boxed{78^\circ}$$

5. Find
- $m\angle QMR$
- .

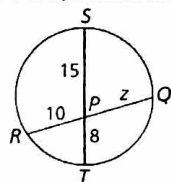


$$m\widehat{MR} = 2(41) = 82$$

$$m\widehat{QR} = 360 - 82 - 120 = 158^\circ$$

$$m\angle QMR = \frac{1}{2}(158) = \boxed{79^\circ}$$

6. Find the value of z and then RQ.

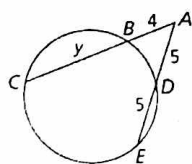


$$15 \cdot 8 = 10 \cdot z$$

$$\boxed{z = 12}$$

$$\boxed{RQ = 22}$$

7. Find the value of y and then find AC.



$$4(4 + y) = 5(10)$$

$$16 + 4y = 50$$

$$4y = 34$$

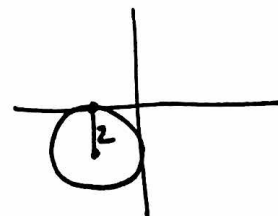
$$\boxed{y = 8.5}$$

$$\boxed{AC = 12.5}$$

8. Write the equation of a circle that passes through
- $(-2, -2)$
- and has center
- $B(-2, 0)$

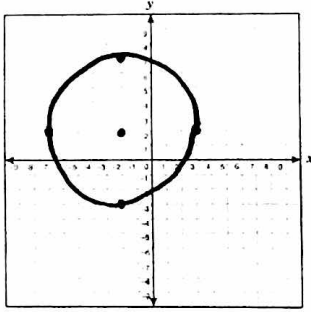
$$*r = 2$$

$$\boxed{(x + 2)^2 + y^2 = 4}$$



9. Write the equation in standard form, then graph the equation. $x^2 + y^2 + 4x - 4y = 17$

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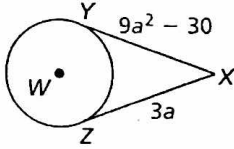
$$x^2 + 4x + 4 + y^2 - 4y + 4 = 17 + 4 + 4$$

$$(x+2)(x+2) + (y-2)(y-2) = 25$$

$$(x+2)^2 + (y-2)^2 = 25$$

10. Find ZX.

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$$9a^2 - 30 = 3a$$

$$9a^2 - 3a - 30 = 0$$

$$3a^2 - a - 10 = 0$$

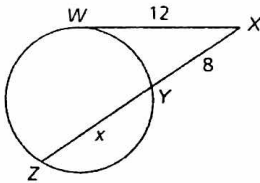
$$(3a+5)(a-2) = 0$$

$$a = 2 \quad a = -\frac{5}{3}$$

$$ZX = 3(2) = \boxed{6}$$

11. Find ZX.

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$$(8)(x+8) = 12^2$$

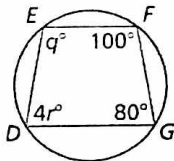
$$8x + 64 = 144$$

$$8x = 80 \rightarrow x = 10$$

$$ZX = 18$$

12. Find the values of q and r.

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$$q + 80 = 180$$

$$q = 100$$

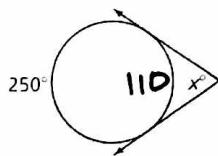
$$4r + 100 = 180$$

$$4r = 80$$

$$r = 20$$

13. Find the value of x.

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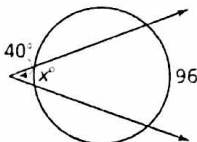


$$x = \frac{1}{2}(250 - 110)$$

$$x = \frac{1}{2}(140) \rightarrow \boxed{x = 70}$$

14. Find the value of x.

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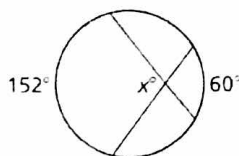


$$40 = \frac{1}{2}(96 - x)$$

$$80 = 96 - x \rightarrow \boxed{x = 16}$$

15. Find the value of x.

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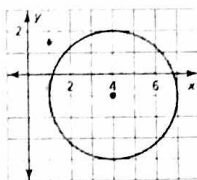


$$x = \frac{1}{2}(60 + 152)$$

$$x = \frac{1}{2}(212) \rightarrow \boxed{x = 106^\circ}$$

16. Write the equation of the circle.

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$$(x-4)^2 + (y+1)^2 = 9$$