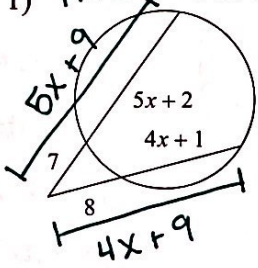


Angle and Segment Relationships Mixed Review 2

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

1) Two Secants



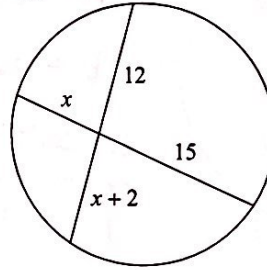
$$8(4x+9) = 7(5x+9)$$

$$32x+72 = 35x+63$$

$$9 = 3x$$

$$\boxed{x=3}$$

2) Two Chords



$$12(x+2) = 15x$$

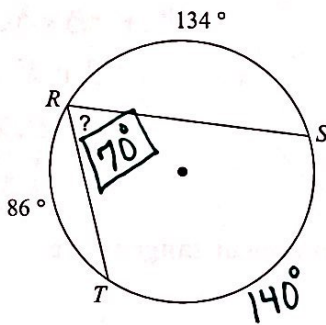
$$12x+24 = 15x$$

$$24 = 3x$$

$$\boxed{x=8}$$

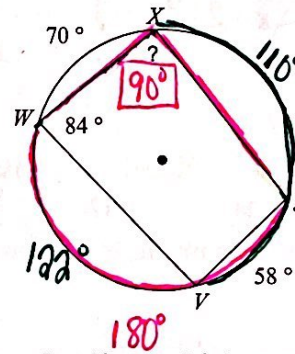
Find the measure of the arc or angle indicated.

3)



$$360 - 134 - 86 = 140$$

4)



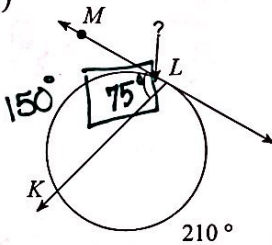
$$84 \cdot 2 = 168$$

$$360 - 70 - 58 - 110 = 122$$

$$168$$

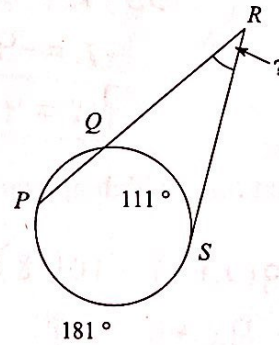
Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

5)



$$360 - 210 = 150$$

6)

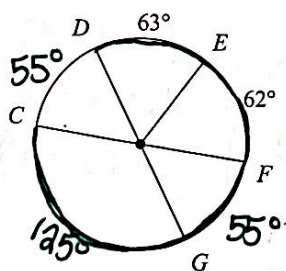


$$\frac{181 - 111}{2} = x$$

$$\boxed{x = 35}$$

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

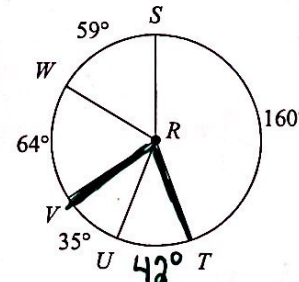
7) $m\widehat{DFC}$



$$180 - 63 - 62 = 55$$

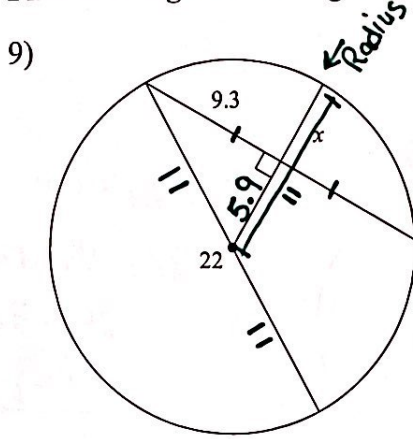
$$\boxed{m\widehat{DFC} = 305}$$

8) $m\angle TRV$



$$\boxed{\angle TRV = 77}$$

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



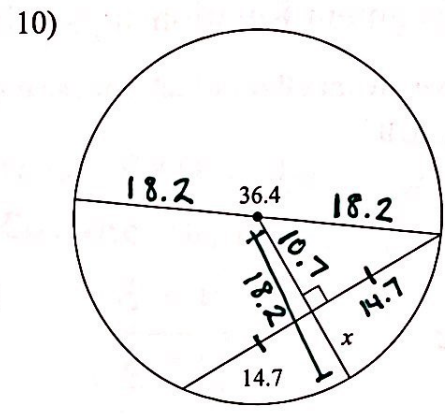
$$9.3^2 + b^2 = 11^2$$

$$b^2 = 34.51$$

$$b = 5.9$$

$$11 - 5.9 = 5.1$$

$x = 5.1$



$$14.7^2 + b^2 = 18.2^2$$

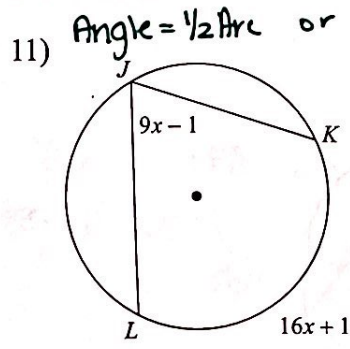
$$b^2 = 115.15$$

$$b = 10.7$$

$$18.2 - 10.7 = 7.5$$

$x = 7.5$

Solve for x.



Angle = 1/2 Arc or 2 * Angle = Arc

$$2(9x - 1) = 16x + 14$$

$$18x - 2 = 16x + 14$$

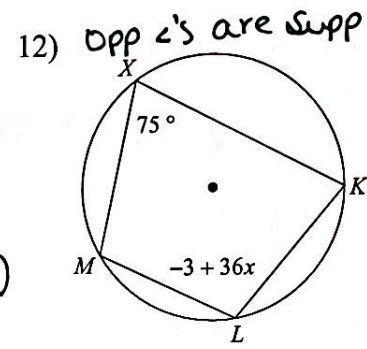
$x = 8$

or

$$9x - 1 = \frac{1}{2}(16x + 14)$$

$$9x - 1 = 8x + 7$$

$$x = 8$$



Opp \angle 's are supp

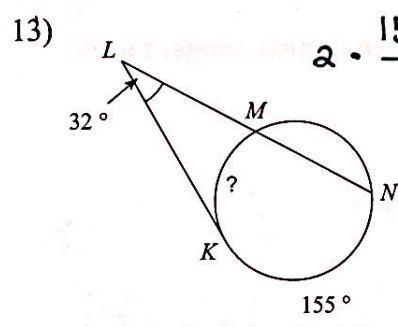
$$75 + -3 + 36x = 180$$

$$72 + 36x = 180$$

$$36x = 108$$

$x = 3$

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

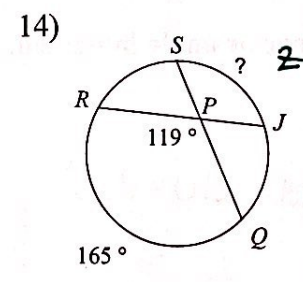


$$2 \cdot \frac{155 - x}{2} = 32 \cdot 2$$

$$155 - x = 64$$

$$-x = -91$$

$x = 91^\circ$

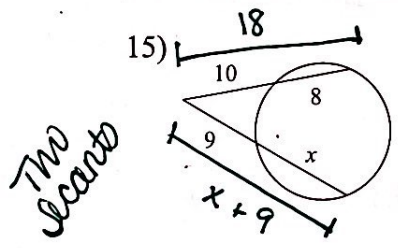


$$2 \cdot \frac{165 + x}{2} = 119 \cdot 2$$

$$165 + x = 238$$

$x = 73^\circ$

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

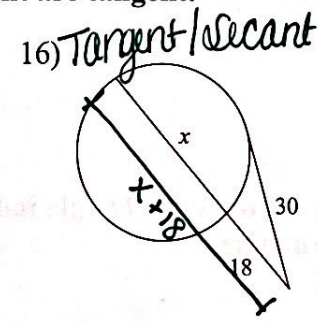


$$9(x + 9) = 10(18)$$

$$9x + 81 = 180$$

$$9x = 99$$

$x = 11$



Tangent / Secant

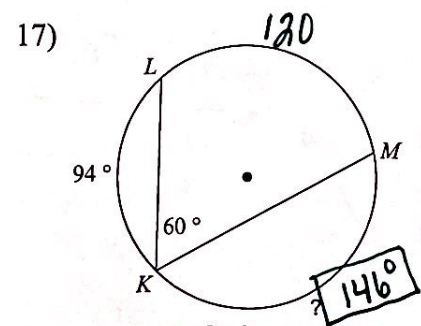
$$(30)^2 = 18(x + 18)$$

$$900 = 18x + 324$$

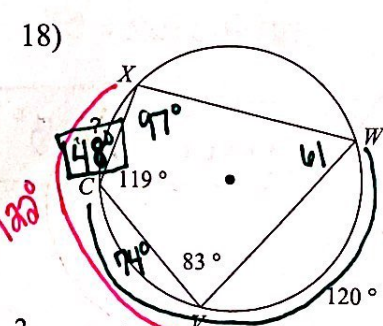
$$576 = 18x$$

$x = 32$

Find the measure of the arc or angle indicated.



146°



$$180 - 83 = 97$$

$$180 - 119 = 61$$

$$97 \cdot 2 = 194$$