

1) **Core Concept**

If $m\widehat{EB} = 64^\circ$ then

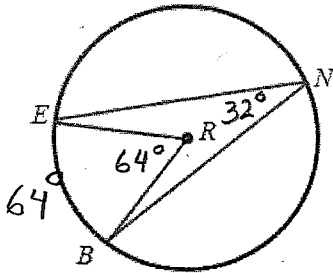
a) $m\angle R = \underline{64^\circ}$

b) $m\angle N = \underline{32^\circ}$

If $m\angle N = 25^\circ$ then

c) $m\widehat{EB} = \underline{50^\circ}$

d) $m\angle R = \underline{50^\circ}$



2) Fill in the blanks with the choices below. Use the diagram from problem 1.

half equal inscribed central intercepted

a) $\angle R$ is the central angle.

b) $\angle N$ is an inscribed angle.

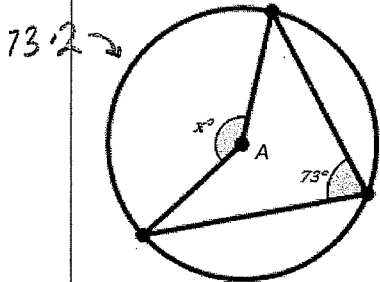
c) \widehat{EB} is the intercepted arc.

d) The measure of the central angle and the measure of its intercepted arc are equal.

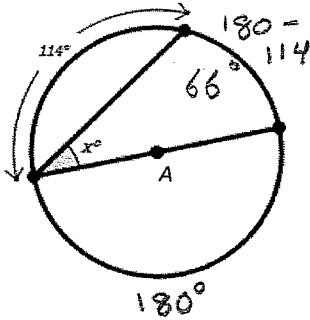
e) The measure of the inscribed angle is equal to half the measure of the intercepted arc.

Find the value of x . Point A is the center of the circle.

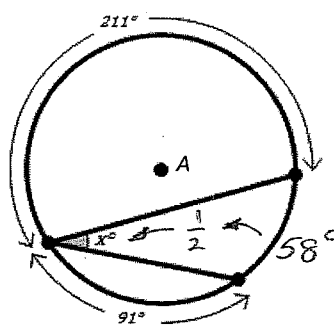
3) $x = \underline{146^\circ}$



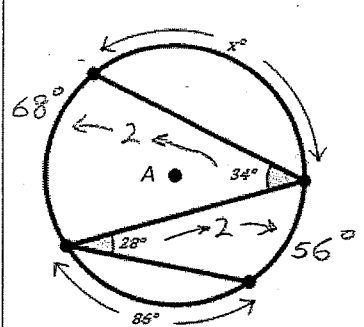
4) $x = \underline{33^\circ}$



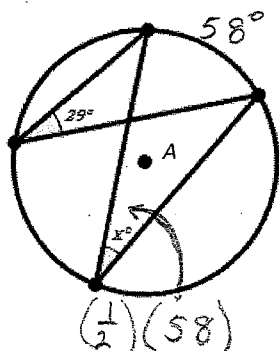
5) $x = \underline{29^\circ}$



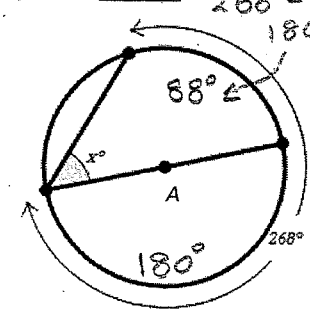
6) $x = \underline{150^\circ}$



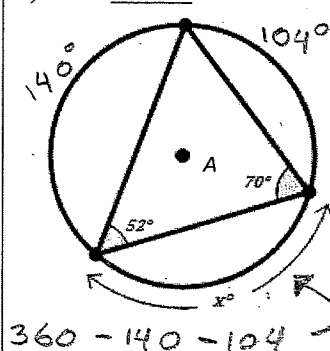
7) $x = \underline{29^\circ}$



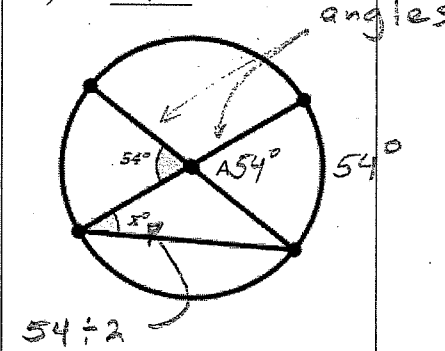
8) $x = \underline{44^\circ}$



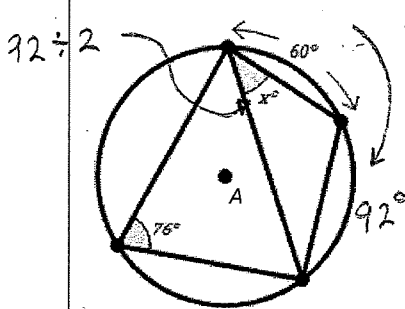
9) $x = \underline{116^\circ}$



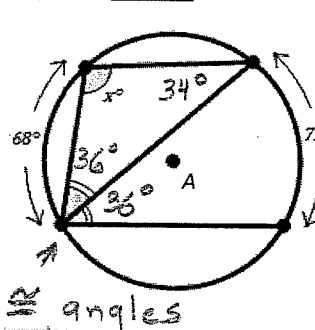
10) $x = \underline{27^\circ}$



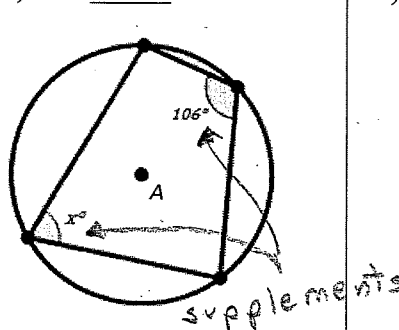
11) $x = \underline{46^\circ}$



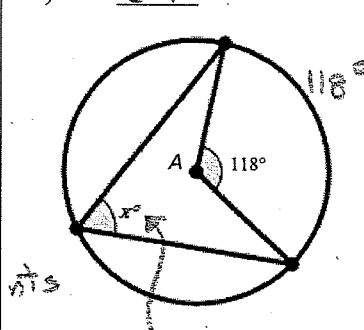
12) $x = \underline{110^\circ}$



13) $x = \underline{74^\circ}$



14) $x = \underline{59^\circ}$



Answers: 27, 29, 29, 33, 44, 46, 59, 63, 74, 74, 116, 150, 150, 165

3 -> 146

12 -> 110

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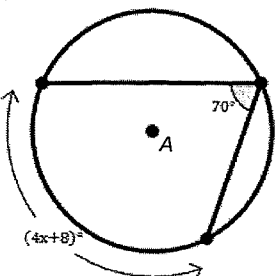
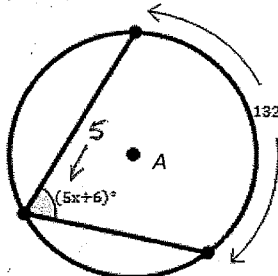
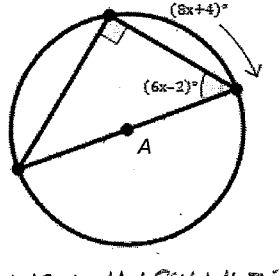
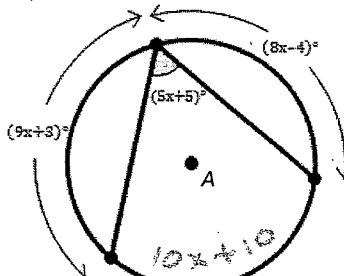
$$90 + 6x - 2 + \frac{1}{2}(8x + 4) = 180$$

$$\text{or } 180 + 2(6x - 2) + 8x + 4 = 360$$

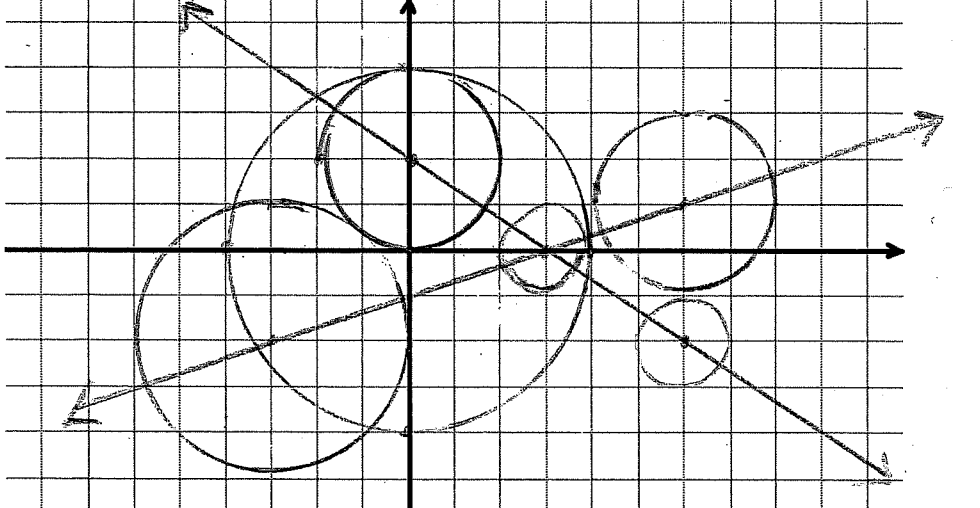
Key

HW #5:

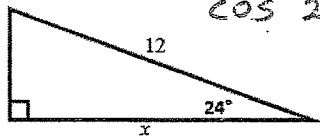
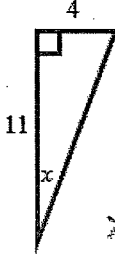
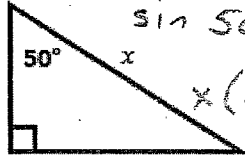
Write and solve an equation to find the value of x . Clearly show the equation used to find x .

<p>15)</p>  $4x + 8 = 140$ $4x = 132$ $x = 33$	<p>16)</p>  $10x + 12 = 132$ $10x = 120$ $x = 12$	<p>17)</p>  $180 + 12x - 4 + 8x + 4 = 360$ $180 + 20x = 360$ $20x = 180$ $x = 9$	<p>18)</p>  $9x + 3 + 8x - 4 + 10x + 10 = 360$ $27x + 9 = 360$ $27x = 351$ $x = 13$
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19) Graph each equation. They are circles and lines. Recall: $(x-h)^2 + (y-k)^2 = r^2$ center: (h,k) radius: r

<p>a) $x^2 + y^2 = 16$ b) $(x-3)^2 + y^2 = 1$ c) $(x+3)^2 + (y+2)^2 = 9$ d) $x^2 + (y-2)^2 = 4$ e) $(x-6)^2 + (y-1)^2 = 4$ f) $(x-6)^2 + (y+2)^2 = 1$ g) $y = \frac{-2}{3}x + 2$ h) $y = \frac{1}{3}x - 1$</p>	
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Review: For 20-22, show the trig equation used to find answer. Round to the nearest hundredth.

<p>20) Find the value of x.</p>  $\cos 24 = \frac{x}{12}$ $x \approx 10.96$	<p>21) Find the value of x.</p>  $\tan x = \frac{4}{11}$ $x \approx 19.98$ $x \approx 20.0$	<p>22) Find the value of x.</p>  $\sin 50 = \frac{8}{x}$ $x(\sin 50) = 8$ $x = \frac{8}{\sin 50} \approx 10.44$
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<p>23) Rewrite each in factored form. Use scratch paper if necessary.</p> <p>a) $x^2 + 6x + 9 = (x+3)(x+3) = (x+3)^2$ b) $x^2 - 10x + 25 = (x-5)(x-5) = (x-5)^2$ c) $x^2 - 2x + 1 = (x-1)(x-1) = (x-1)^2$ d) $x^2 - 16 = (x+4)(x-4)$</p>	<p>24) Fill in the blanks to make each statement true.</p> <p>a) $x^2 + 16x + \underline{64} = (x + \underline{8})^2$ b) $x^2 + \underline{8}x + \underline{16} = (x + 4)^2$ c) $x^2 - 14x + \underline{49} = (x - \underline{7})^2$ d) $x^2 + 20x + \underline{100} = (x + \underline{10})^2$</p>
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Answers: 15-18 and 20-22: 9, 10.44, 10.96, 12, 13, 19.98, 33