Slide 1:

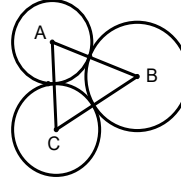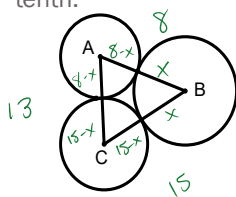# 10.1-10.4, 10.9 Review

Clickers

Slide 2:

1) If AB=8, BC=15, AC=13, find the area of circle B. If necessary, round to the nearest tenth.

Slide 3:

1) If AB=8, BC=15, AC=13, find the area of circle B. If necessary, round to the nearest tenth.

$8 - x + 15 - x = 13$

$23 - 2x = 13$

$10 = 2x$

$5 = x$
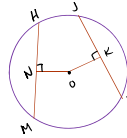
area OB $= \pi 5^2$

$= 25\pi$
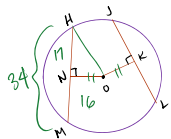
≈ 78.5

Slide 4:

2) HM=JL=34, NO=5x-4, OK=2x+8. Find the circumference of circle O. If necessary, round to the nearest tenth.

Slide 5:

2) HM=JL=34, NO=5x-4, OK=2x+8. Find the circumference of circle O. If necessary, round to the nearest tenth.


$5x - 4 = 2x + 8$

$3x = 12$

$x = 4$

$\overline{NO} = 5 \cdot 4 - 4 = 16$

$17^2 + 16^2 = 545$

$r = \sqrt{545}$, $C = 2\sqrt{545} \cdot \pi$

≈ 146.7

Slide 6:

3) There is a rubber band wrapped tightly around circle A and circle B (the yellow line). If the distance between the centers of circle A and B is 20 and the radii are 4 and 6, find the length of the rubber band. If necessary, round to the nearest tenth.
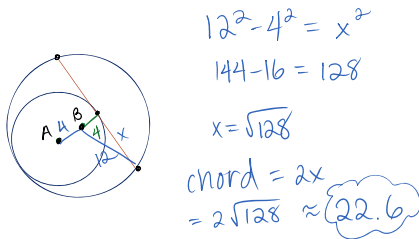
3) There is a rubber band wrapped tightly around circle A and circle B (the yellow line). If the distance between the centers of circle A and B is 20 and the radii are 4 and 6, find the length of the rubber band. If necessary, round to the nearest tenth.

$$10\sqrt{3}+10\sqrt{3}+\left(\frac{270}{360}\right)8\pi+\left(\frac{270}{360}\right)12\pi$$

$$\approx 81.8$$

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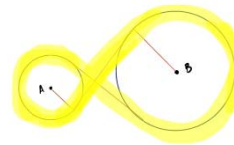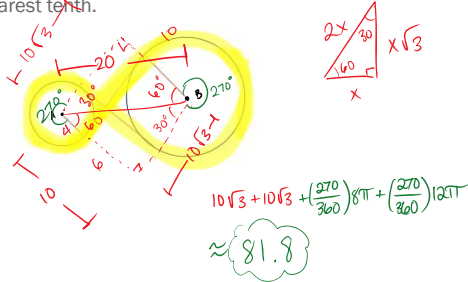
4) Circles A and B with radii 8 and 12 are internally tangent. The distance between the two centers is 4. Find the length of the chord, and if necessary, round to the nearest tenth.


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4) Circles A and B with radii 8 and 12 are internally tangent. The distance between the two centers is 4. Find the length of the chord, and if necessary, round to the nearest tenth.

$$12^2-4^2 = x^2$$
$$144-16 = 128$$
$$x = \sqrt{128}$$
$$chord = 2x$$
$$= 2\sqrt{128} \approx 22.6$$

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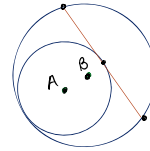
5) A square is inscribed in a circle with side lengths of 7in. Find the circumference of the circle, and if necessary, round to the nearest tenth.

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$$7 = x\sqrt{2}$$
$$\frac{7}{\sqrt{2}} = x$$
$$x = \frac{7\sqrt{2}}{2}$$
$$C = 7\sqrt{2}\cdot\pi$$
$$\approx 31.1 \, in^2$$

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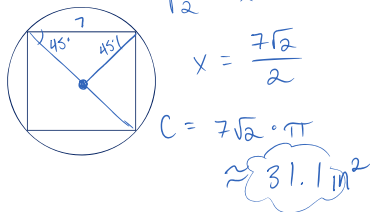
6) Circle O has a radius of 12 and $m\overarc{AB} = 3\pi$. Find $\angle AOD$, if necessary round to the nearest tenth.
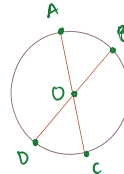
6) Circle O has a radius of 12 and $m\overarc{AB} = 3\pi$. Find $\angle AOD$, if necessary, round to the nearest tenth.
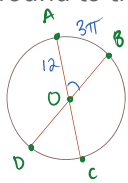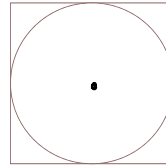
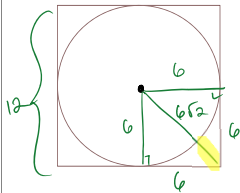$$C = 24\pi \qquad \frac{3\pi}{24\pi} = \frac{1}{8}$$

$$\frac{1}{8}(360) = 45°$$

$$180° - 45° = 135°$$

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7) Circle J is inscribed in a square with a perimeter of 48. Find the distance from the corner of the square to the circle. If necessary, round to the nearest tenth.


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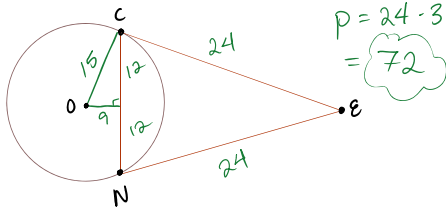
$$\frac{48}{4} = 12$$

$$6\sqrt{2} - 6 \approx 2.5$$

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8) Circle O has a radius of 15, the distance from the center of circle O to chord CN is 9, CE=24, and CE and NE are both tangent to circle O. Find the perimeter of the triangle, rounding to the nearest tenth if necessary.

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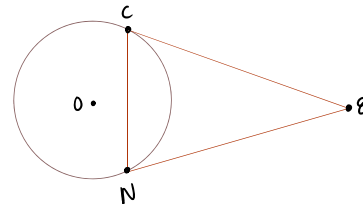
8) Circle O has a radius of 15, the distance from the center of circle O to chord CN is 9, CE=24, and CE and NE are both tangent to circle O. Find the perimeter of the triangle, rounding to the nearest tenth if necessary.

$$P = 24 \cdot 3$$
$$= 72$$