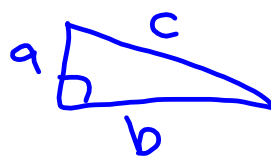
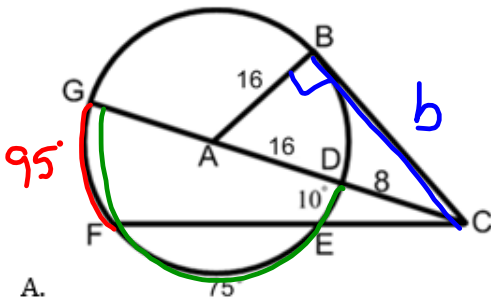


Today's Objective: Unit 6 Test Remediation

Use the figures below to answer #1-2.



$$16^2 + b^2 = 24^2$$

$$256 + b^2 = 576$$

$$- 256 \quad - 256$$

$$\sqrt{b^2} = \sqrt{320}$$

$$b = 17.88$$

1A. What is $m\widehat{GF}$?

$$180 - 85 = 95^\circ$$

2A. What is \overline{BC} ?

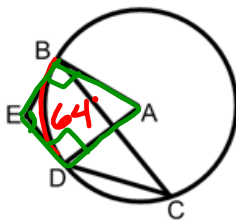
$$\overline{BC} = 17.88$$

\overline{EB} and \overline{ED} are tangent to the circle. The figure is not drawn to scale. Use the figure below to answer #3-4

$$\begin{aligned} \angle E &= 180 - 64 \\ &= 116^\circ \end{aligned}$$

3A. $m\widehat{BD} = 64^\circ$, what is $m\angle A$?

$$64^\circ$$



4A. $m\widehat{BD} = 64^\circ$, what is $m\angle C$?

$$\frac{64}{2} = 32^\circ$$

5A. What is the equation of the circle with the given center and a radius?

Center: $(-4, 6)$

Radius: $16r$

$$(x-h)^2 + (y-k)^2 = r^2$$

$$(x+4)^2 + (y-6)^2 = 16^2$$

$$(x+4)^2 + (y-6)^2 = 256$$

6A. Complete the square to find the center and radius of the circle.

$$x^2 + 16x + y^2 - 12y = -7$$

$$\underline{x^2 + 16x + 64} + \underline{y^2 - 12y + 36} = -7 + \underline{64} + \underline{36}$$

Center:

Radius:

$$\underline{(x + 8)^2} + \underline{(y - 6)^2} = 93$$

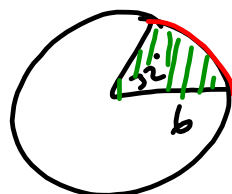
$$C: (-8, 6)$$

$$r: \sqrt{93} = 9.64$$

7A. What is the **arc length** and **area** of a sector that has the given radius and central angle?

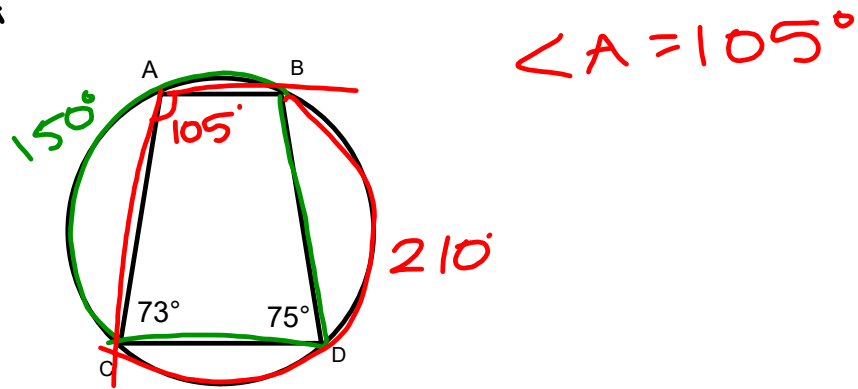
Radius: 6 ft

Central Angle: 32°



$$\text{Arc Length: } \frac{\pi r \theta}{180} = \frac{\pi(6)(32)}{180} = 3.35 \text{ ft}$$

$$\text{Area: } \frac{\pi r^2 \theta}{360} = \frac{\pi(6)^2(32)}{360} = 10.1 \text{ ft}^2$$

Find $\angle A$ 

8A. What is the volume of a cone with the given diameter and height?

Diameter: 10 ft $r = 5$

Height: 4 ft

$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (5)^2 (4) = 104.72 \text{ ft}^3$$
