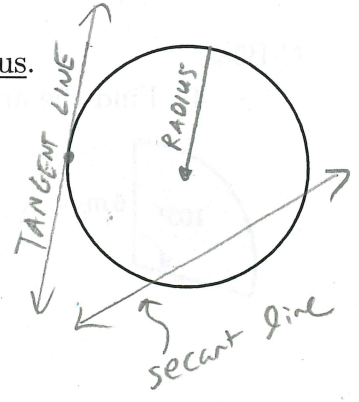


CO-A1d

Practice Assessment

Sols. (NA)

1. In the circle here, draw and label a tangent line, a secant line, and a radius.



Terms to Know:

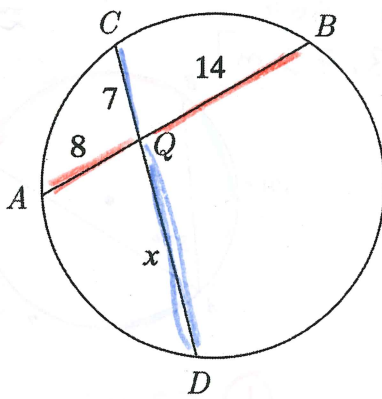
any from video assigned 2/27!

Def'n of circle

- radius
- circumference
- secant
- pt. of tangency
- segment
- diameter
- chord
- tangent
- sector
- central angle
- major arc
- minor arc

C-A1a

2. Find the length of  $\overline{CD}$ .



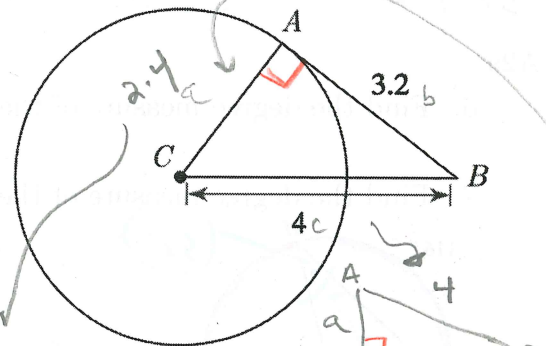
$$8 \cdot 14 = 7 \cdot x$$

$$\frac{112}{7} = \frac{7x}{7}$$

$$16 = x$$

So  $\overline{CD}$  is  $7 + 16$ , or **23**

3  $\overline{AB}$  is tangent to circle C. Find its diameter.



So diameter is  $2.4 \times 2 = 4.8$

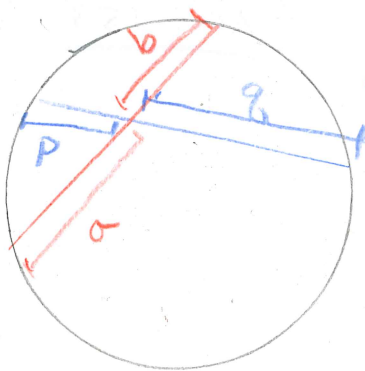
$$a^2 + 3.2^2 = 4^2$$

$$a^2 + 10.24 = 16$$

$$a^2 = 5.76$$

$$a = \sqrt{5.76} = 2.4$$

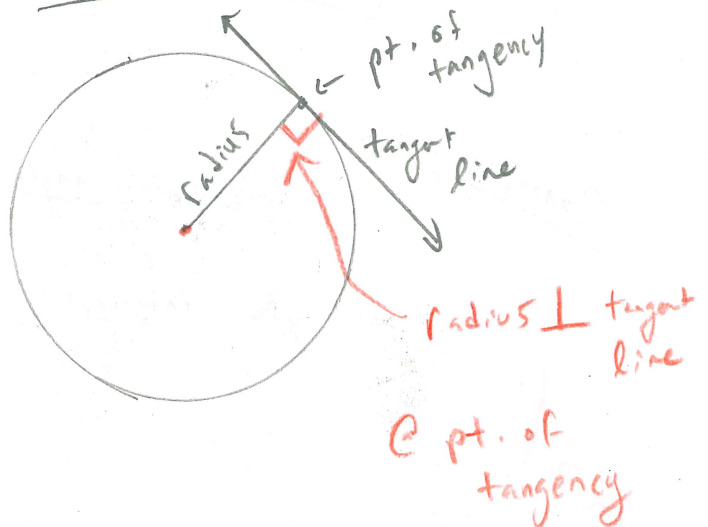
Concept ↴



$a \cdot b = p \cdot q$   
(because of similar triangles)

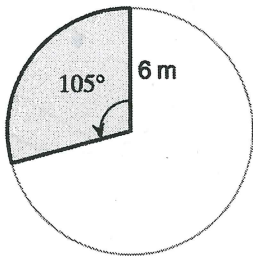


Concept



C-B5a

4. Find the area of the shaded sector.



Method 1: Proportions

Area of whole circle:  $\pi \cdot 6^2 = 36\pi$

$$\frac{105^\circ}{360^\circ} = \frac{x}{36\pi}$$

← part  
← whole

$$36\pi \cdot 105 = 360 \cdot x$$

$$\frac{36\pi \cdot 105}{360} = x$$

$$10.5\pi \text{ m}^2 = x$$

$$32.99 \text{ m}^2 \approx x$$

METHOD 2: FORMULA

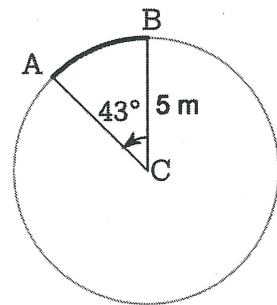
$$A_s = \frac{\theta}{360} \cdot \pi \cdot r^2$$

$$A_s = \frac{105^\circ}{360} \cdot 36\pi$$

$$A_s = 10.5\pi \text{ m}^2$$

$$A_s \approx 32.91 \text{ m}^2$$

5. Find the length of  $\widehat{AB}$



Method 1: Proportions

total Circumference

$$C = 2\pi \cdot 5$$

$$C = 10\pi \text{ m}$$

$$\frac{43^\circ}{360^\circ} = \frac{x}{10\pi}$$

← part  
← whole

degrees length

$$360x = (43)(10\pi)$$

$$x = \frac{(43)(10\pi)}{360}$$

$$x \approx 3.75 \text{ m}$$

Method 2: Formula

$$\text{Arc} = \frac{\theta}{360} \cdot 2\pi r$$

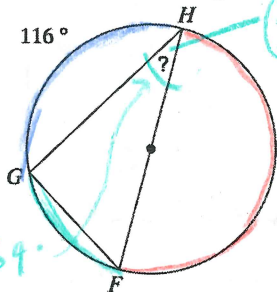
$$= \frac{43}{360} \cdot 2\pi \cdot 5$$

$$\approx 3.75 \text{ m}$$

C-A2a

6. Find the degree measure of the indicated arc.

7. Find the degree measure of the indicated angle below.



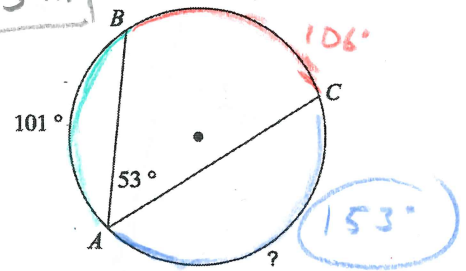
① \* NOTE THAT  $\widehat{HF}$  is a diameter!  
So  $\widehat{HF} = 180^\circ!$

②  $180^\circ + 116^\circ + \widehat{GF} = 360^\circ$

$$296 + \widehat{GF} = 360$$

$$\widehat{GF} = 64^\circ$$

③  $\frac{64^\circ}{2} = 32^\circ$



①  $53^\circ \times 2 = 106^\circ$

②  $101^\circ + 106^\circ + \widehat{AC} = 360^\circ$

$$207^\circ + \widehat{AC} = 360^\circ$$

$$\widehat{AC} = 153^\circ$$

Concepts

Inscribed angle's measure is half the intercepted arc.

