

**MAY 17, 2016**

**UNIT 8: CIRCLE GEOMETRY**

**8.2: PROPERTIES OF  
CHORDS IN A  
CIRCLE**

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***MATH 9***



## **WHAT'S THE POINT OF TODAY'S LESSON?**

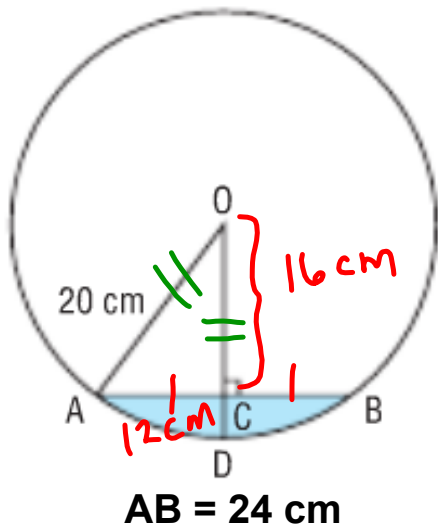
**We will continue working on the Math 9 Specific Curriculum Outcome (SCO) "Shape and Space 1" OR "SS1" which states:**

**"Solve problems and justify the solution strategy using circle properties, including:**

- \* the perpendicular from the centre of a circle to a chord bisects the chord;**
- \* the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc;**
- \* the inscribed angles subtended by the same arc are congruent;**
- \* a tangent to a circle is perpendicular to the radius at the point of tangency."**

## WARM-UP:

**Example:** Determine the length of CD in the diagram below.



$$\begin{aligned} AC &= \frac{AB}{2} \quad (\text{PCP}) \\ &= \frac{24}{2} \\ &= 12 \text{ cm} \end{aligned}$$

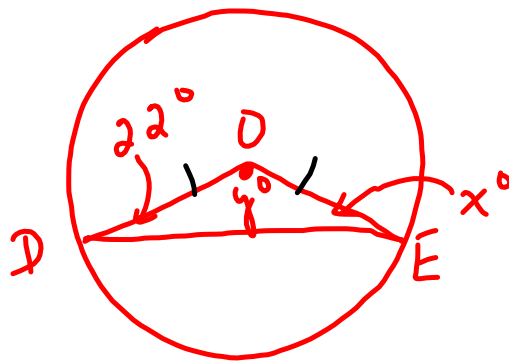
$$\begin{aligned} c^2 - b^2 &= a^2 \\ 20^2 - 12^2 &= CO^2 \\ 400 - 144 &= CO^2 \\ \sqrt{256} &= \sqrt{CO^2} \\ 16 \text{ cm} &= CO \end{aligned}$$

$$\begin{aligned} CD &= DO - CO \\ &= 20 - 16 \\ &= 4 \text{ cm} \end{aligned}$$

HOMWORK QUESTIONS???

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4. b)

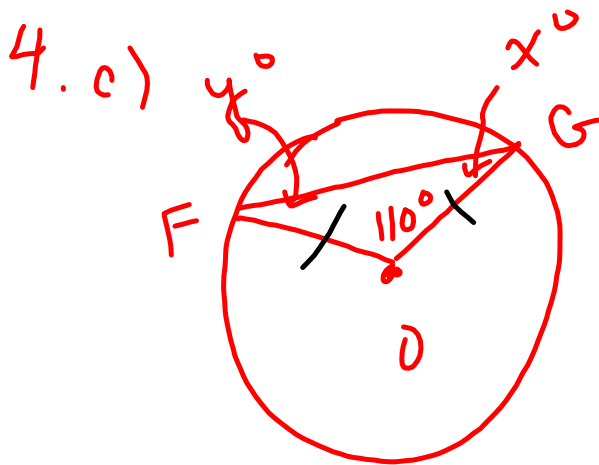


$$\angle D = 22^\circ (\text{Given})$$

$$\angle x = 22^\circ (\text{ITT})$$

$$\angle y = 136^\circ (\text{SATT})$$

**HOMWORK QUESTIONS???**  
**(PAGE 397: #3, #4bc, #5 & #6)**



$$\angle FOG = 110^\circ \text{ (given)}$$
$$\angle x = \angle y = 35^\circ \text{ (ITT / SATT)}$$

## CONCEPT REINFORCEMENT:

MMS9:

PAGE 398: #7 & #9 TO #12 [10(a) = 3.5]