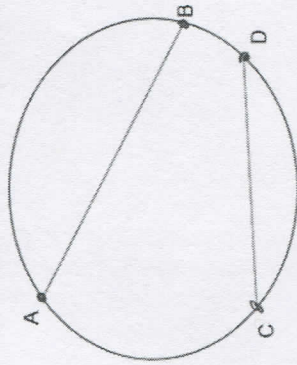


OBJECTIVE 1: Chords in a Circle

- Chords in a circle have endpoints on the circle
- Chords in a circle are named using two CAPITAL letters
- The longest chord in a circle is always the diameter



TASK 1:

Name the two chords in this circle. Is the longest chord of the circle included?

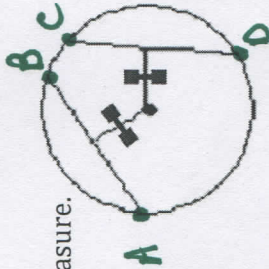
\overline{AB} \overline{CD}

OBJECTIVE 2: Using Chords

1. Chords equidistant from the center are always equal in measure.

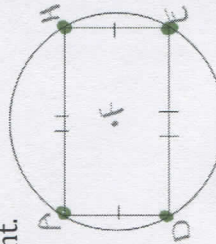
$$\overline{AB} \cong \overline{CD}$$

$$AB = CD$$



2. If two chords are congruent then corresponding arcs are congruent.

- o \overline{AHED} is an inscribed rectangle in circle F.

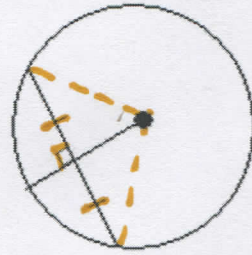


- o Arc DAH is congruent to Arc AEH

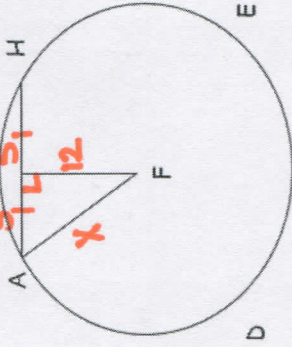
- o Arc ADE is congruent to Arc AHE

$$\widehat{AH} \cong \widehat{DE} \text{ or } m\widehat{AH} = m\widehat{DE} \quad \widehat{AD} \cong \widehat{HE} \text{ or } m\widehat{AD} = m\widehat{HE}$$

3. Diameters intersecting chords bisect the chord and its arc AND are perpendicular to the chord.

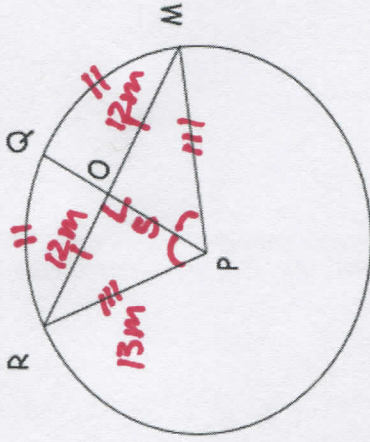


TASK 2: Suppose \overline{AH} is 10 inches long and 12 inches from the center of the circle. Find the radius.



$5, 12, 13$
 $x = 13$
 $5^2 + 12^2 = x^2$
 $AF = 13$

TASK 3: In circle P, radius \overline{PQ} is perpendicular to chord \overline{RM} .



a) Name the arc congruent to \widehat{QR} .

\widehat{QM}

b) If $PR = 13m$ & $RM = 24m$, find PO .

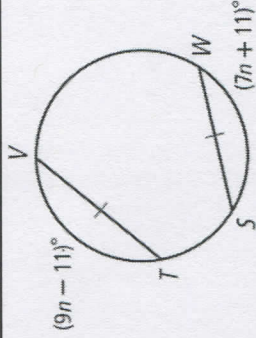
$5, 12, 13$ $5m$

c) Name the segment congruent to \overline{PM} .

\overline{RM} or \overline{PQ}

TASK 4: More Chords

a) $\overline{TV} \cong \overline{WS}$. Find $m\widehat{WS}$.



$m\widehat{WS} = 88^\circ$

$9n - 11 = 7n + 11$
 $2n = 22$
 $n = 11$

Mistakes you made while at the boards:

Still need help with: