Warm UP

Give the best term.

1. $\overrightarrow{AG}$ tangent   3. $\overline{DB}$ chord

2. $\overleftrightarrow{DB}$ secant   4. $\overline{HG}$ radius

5. $\overline{FE}$ tangent

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Solve for x   Warm UP ②

① 13, x, 12

$a^2 + b^2 = c^2$

$2x - 4$ 10

$2x - 4 = 10$

Apr 11-9:08 AM

10.3   Using Chords

Mar 21-9:46 PM

Theorem 10.3

In the same circle, or in congruent circles, two minor arcs are congruent if and only if their corresponding chords are congruent.   IFF

$\overset{\frown}{AB} \cong \overset{\frown}{CD}$ if and only if $\overline{AB} \cong \overline{CD}$.

Mar 23-9:44 PM

Examples:

$m\overset{\frown}{BC} =$

116°

360
-116

$m\overset{\frown}{ACB} = 244$

$m\overset{\frown}{AC} = 122°$ $2\sqrt{m\overset{\frown}{BC} = 122°}$

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⊥ rt angle   cuts it in half

If one chord is a perpendicular bisector of another chord, then the first chord is a diameter.

SQ is a diameter

$m\overset{\frown}{TQ} \cong m\overset{\frown}{RQ}$

$\overline{PR} \cong \overline{PT}$

If $\overline{QS}$ is a perpendicular bisector of $\overline{TR}$, then $\overline{QS}$ is a diameter of the circle.

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1

If a diameter of a circle is perpendicular to a chord, then the diameter bisects the chord and its arc.

If $\overline{EG}$ is a diameter and $\overline{EG} \perp \overline{DF}$, then $\overline{HD} \cong \overline{HF}$ and $\overset{\frown}{GD} \cong \overset{\frown}{GF}$

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Is PR a diameter?

①   ②

yes

Both $\perp$ and bisector!

NON

NEI
don't know
if $\perp$

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In the same circle, or in congruent circles, two chords are congruent if and only if they are equidistant from the center.

"Same length"

$m\overset{\frown}{AB} \cong m\overset{\frown}{CD}$

$\overline{AB} \cong \overline{CD}$ if and only if $\overline{EF} = \overline{EG}$

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Example:

$6x-5 = 13 + 4x$

$2x = 18$

$x = 9$

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Homework· Pg 549, #3-10, 13,14

Apr 5-7:15 PM