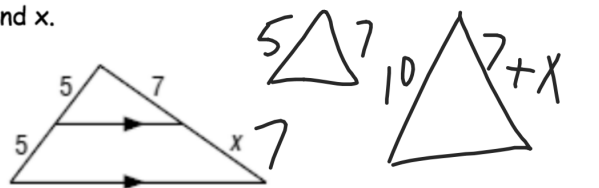


1) Find x.



$$\frac{5}{10} = \frac{7}{7+x}$$

$$70 = 35 + 5x$$

$$5x = 35$$

$$x = 7$$

2) Find x.



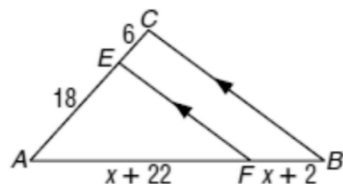
$$\frac{x}{2x+12} = \frac{11}{33}$$

$$33x = 22x + 132$$

$$11x = 132$$

$$\boxed{x = 12}$$

3) In $\triangle ABC$, $\overline{EF} \parallel \overline{CB}$. Find x.



$$\frac{x+22}{18} = \frac{2x+24}{24}$$

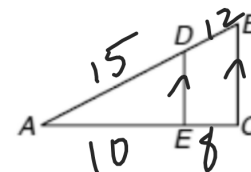
$$24x + 528 = 36x + 432$$

$$96 = 12x$$

$$\boxed{x = 8}$$

4) Determine whether $\overline{BC} \parallel \overline{DE}$.

$AD = 15$, $DB = 12$, $AE = 10$, and $EC = 8$



$$\frac{10}{18} = \frac{15}{27}$$

$$\frac{5}{9} = \frac{5}{9}$$

yes.

Hwk #26 Answers:

1. Arc BC $\cong$ Arc YZ. BC $\cong$ YZ

2. Arc ET $\cong$ Arc GH $\cong$ Arc JN $\cong$ ML. ET $\cong$ GH $\cong$ JN $\cong$ ML. Angle TFE $\cong$ Angle HFG $\cong$ Angle JKN $\cong$ Angle MKL.

3. 14 4. 2 5. 7 6. 50 7. 8

8. 10 11. 6 12. 5.4 13. 8.9 14. 12.5

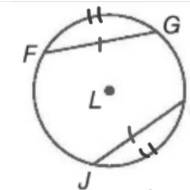
15. 9.9 16. 20.8

Section 12.2

Congruent Chords have Congruent Arcs

Congruent Arcs have Congruent Chords

$$\widehat{FG} \cong \widehat{JH} \quad \text{then} \quad \overline{FG} \cong \overline{JH}$$



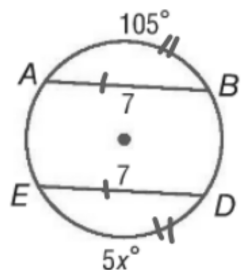
Key Concepts

Theorem 11-4

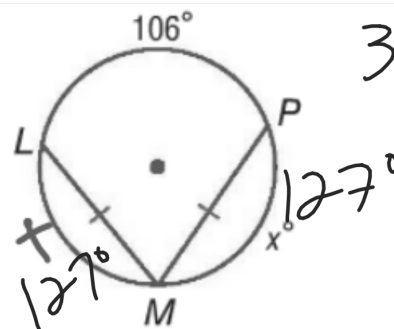
Within a circle or in congruent circles

- (1) Congruent central angles have congruent chords.
- (2) Congruent chords have congruent arcs.
- (3) Congruent arcs have congruent central angles.

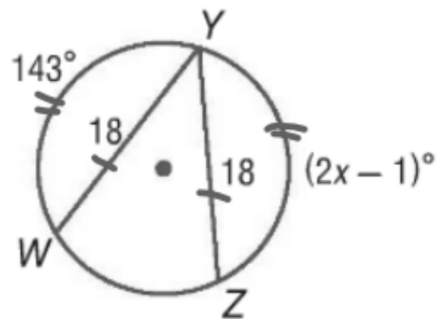
Find the value of x .



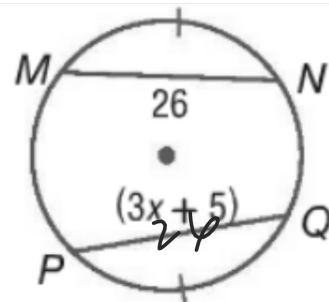
$$\begin{aligned} 5x &= 105 \\ x &= 21 \end{aligned}$$



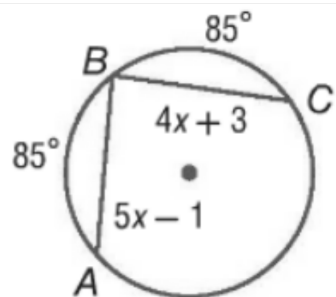
$$\begin{aligned} 360 - 106 \\ = 254 \end{aligned}$$



$$\begin{aligned} 2x-1 &= 143 \\ 2x &= 144 \\ x &= 72 \end{aligned}$$

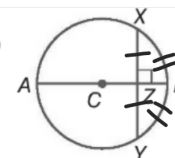


$$\begin{aligned} 3x+5 &= 26 \\ 3x &= 21 \\ x &= 7 \end{aligned}$$

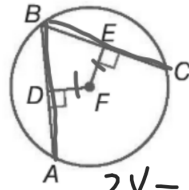


$$\begin{aligned} 5x-1 &= 4x+3 \\ x-1 &= 3 \\ x &= 4 \end{aligned}$$

If a diameter (or radius) is $\perp$ to a chord, then it bisects the arc and chord.

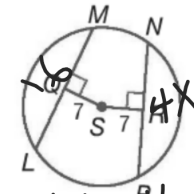
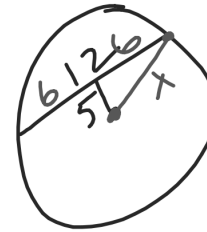


ALGEBRA In $\odot F$, $\overline{AB} \cong \overline{BC}$,
 $DF = 3x - 7$, and $FE = x + 9$.
 What is x ?



$$\begin{aligned} 3x - 7 &= x + 9 \\ 2x &= 16 \\ x &= 8 \end{aligned}$$

ALGEBRA In $\odot S$, $LM = 16$ and
 $PN = 4x$. What is x ?



$$\begin{aligned} 4x &= 16 \\ x &= 4 \end{aligned}$$

Classwork --

Practice 12.2 Worksheet

IXL #15 - U.5 & U.7