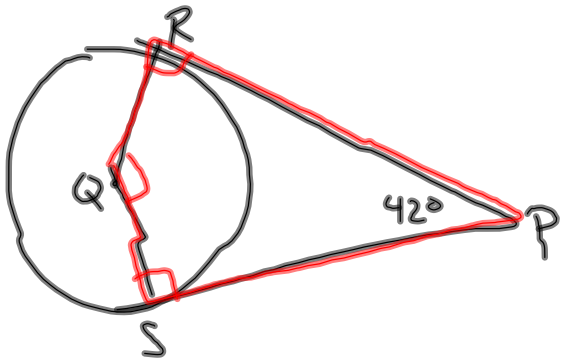
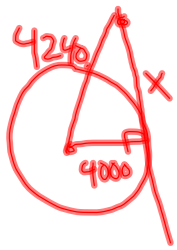
26.



$360-(90+90+42)=138^\circ$

8.



$x^2+4000^2=4240^2$

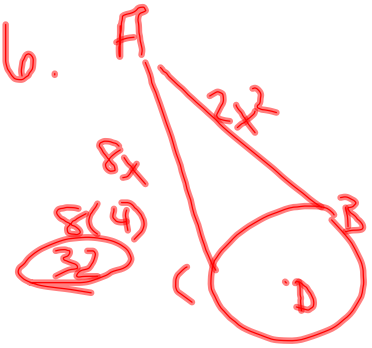
$x^2+16{,}000{,}000=17{,}977600$

$-16{,}000{,}000 \quad -16{,}000{,}000$

$\sqrt{x^2}=\sqrt{1977600}$

$x=$

16.



$2x^2=8x$

$-8x \quad -8x$

$2x^2-8x=0$

$2x(x-4)=0$

$\frac{2x}{2}=\frac{0}{2}$ $\quad x-4=0$

$+4 \quad +4$

$x=0$ $\quad x=4$

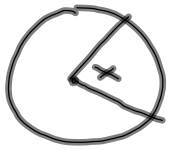
$6-6+$

$7-12v$

$13\uparrow-$

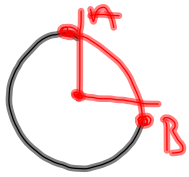
11.2 Arcs and Chords

Central ∠: ∠ whose vertex is the center of a circle.



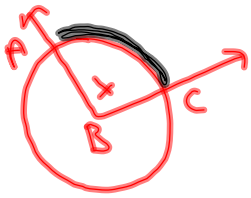
arc: unbroken part of a circle

$\overset{\frown}{AB}$



Minor arc: arc whose endpts are on the interior of a central ∠.

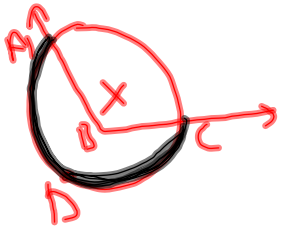
- measure is equal to central ∠.



$m\angle X = m\overset{\frown}{AC}$

Major arc: arc whose endpts. are on the exterior of the central ∠.

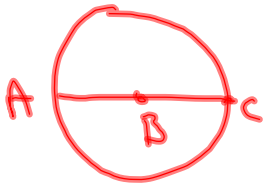
- measure is equal to 360 minus the central ∠.



$360 - m\angle X = m\overset{\frown}{ADC}$

semicircle: endpts. of the arc lie on the diamter.

- measure is equal to 180°



$m\overset{\frown}{ABC} = 180°$

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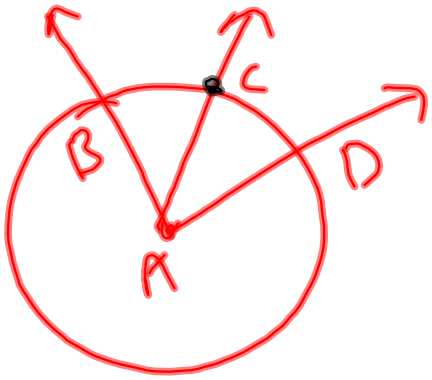
$m\overset{\frown}{AB} = 360 \cdot .25 = 90^\circ$

$m\overset{\frown}{FED} = 360 \cdot .81 = 291.6^\circ$

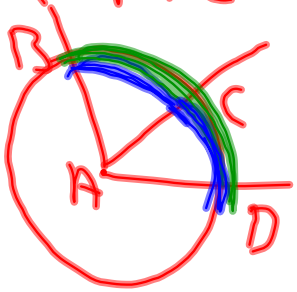
adjacent arcs: arcs of the same circle that intersect in one pt.



$\overset{\frown}{BC}$ & $\overset{\frown}{CD}$

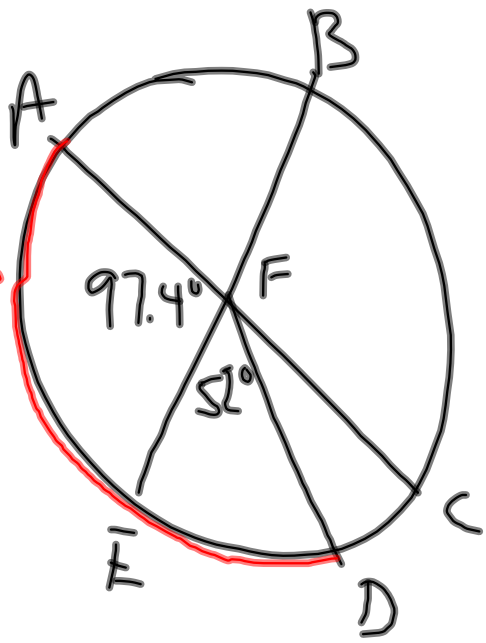
Arc Addition Postulate

The measure of an arc formed by two adjacent arcs is the same as the sum of the measures of the 2 arcs.



$m\overset{\frown}{BCD} = m\overset{\frown}{BC} + m\overset{\frown}{CD}$

Ex:



$m\overset{\frown}{AD}$

$m\overset{\frown}{AE} + m\overset{\frown}{ED}$

$97.4 + 52$

149.4

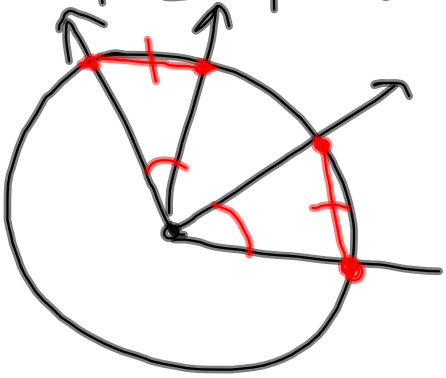
$m\overset{\frown}{CD}$

$180 - 149.4 = 30.6°$

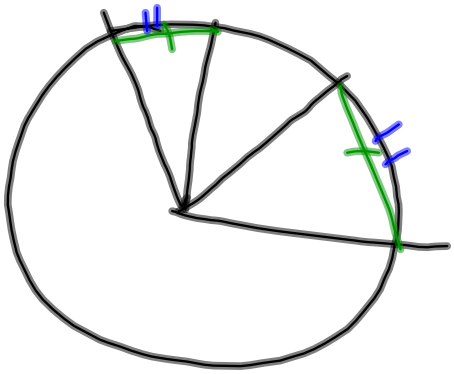
Theorem 11-2-2:

In a circle or $\cong$ circles:

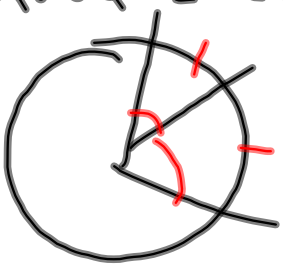
1. $\cong$ central $\angle$'s have $\cong$ chords

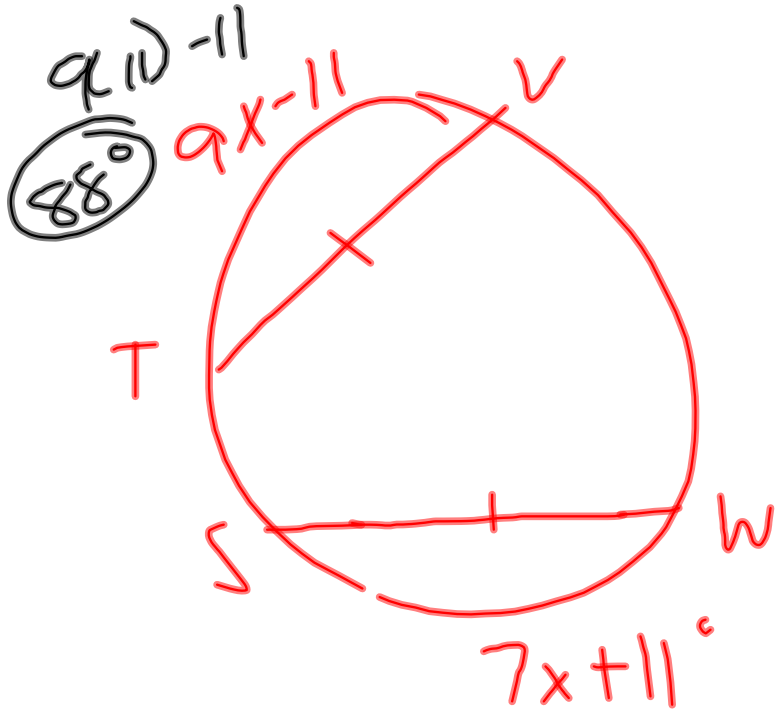


2. $\cong$ chords have $\cong$ arcs



3. $\cong$ arcs have $\cong$ central angles





Find $m\overset{\frown}{TV}$

$9x-11=7x+11$

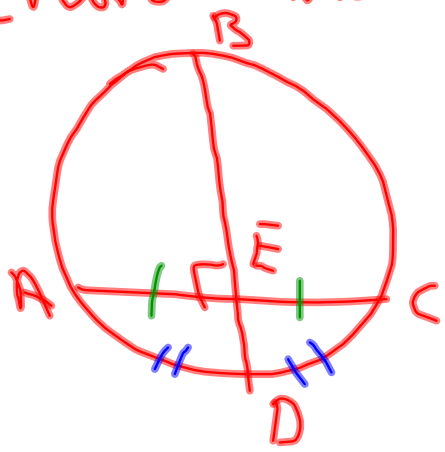
$-7x \quad -7x$

$2x-11=11$

$+11 \quad +11$

$\frac{2x}{2}=\frac{22}{2}$ $x=11$

Theorem 11-2-3: if a radius / diameter is $\perp$ to a chord, then it bisects the chord and arc.

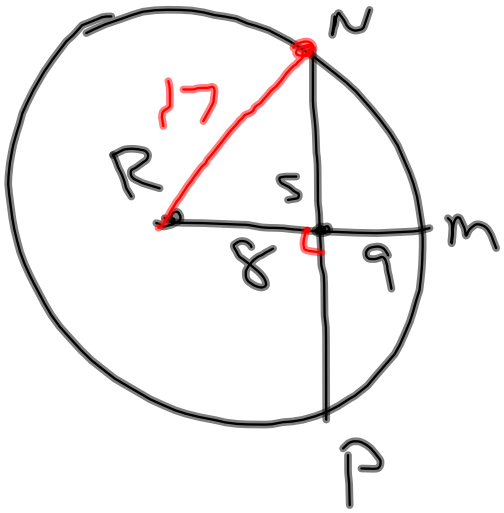


$AE = CE$

$m\overset{\frown}{AD} = m\overset{\frown}{DC}$

Theorem 11-2-4: In a circle, the ⊥ bisector of a chord is the radius/diameter.

Ex:



NP

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2-34 even

Odd extra credit