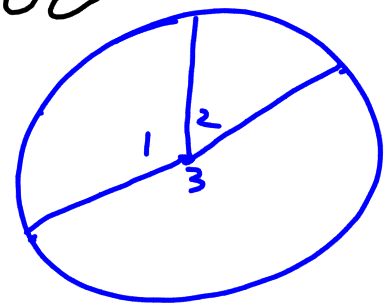
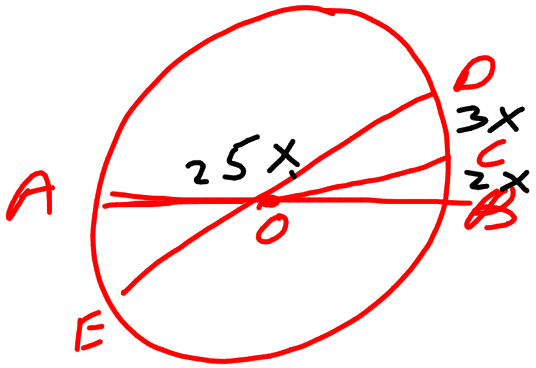
10-2 Angles and Arcs

The sum of the measures of interior angles is 360°



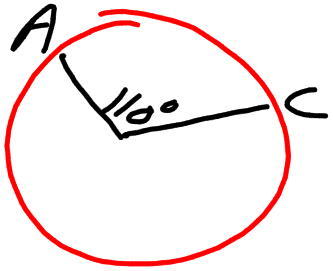
$\angle 1 + \angle 2 + \angle 3 = 360°$



Find
$m\angle AOD$

minor arc | measure of the central angle is less than 180°

Minor arcs named with 2 letters



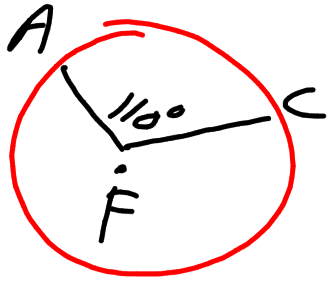
$m\overset{\frown}{AC} = 110°$

The measure of the arc = the measure of the central angle.

Major Arc

measure is greater than 180° and less than 360°

Named with 3 letters

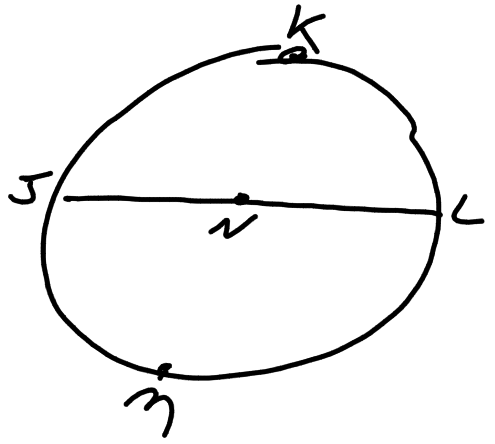


major arc

$m\overset{\frown}{ACF} = 250°$

Semicircle = 180°

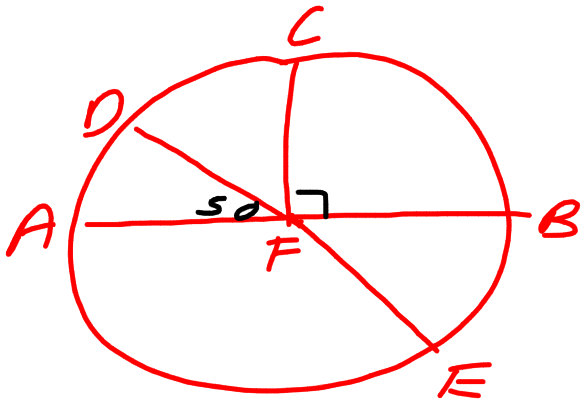
Named with 3 letters



m JML = 180°

2 arcs are congruent if their central angles are congruent.

An arc formed by 2 adjacent arcs = the sum of the 2 arcs.

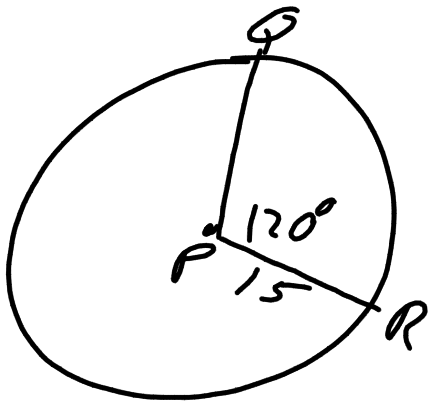


$\odot F$, $m\angle DFA = 50^\circ$ and $CF \perp FB$

Find:

(a) $m\overset{\frown}{BE}$ (b) $m\overset{\frown}{CBE}$ (c) $m\overset{\frown}{ACE}$

See Ex 3, p. 531



$\odot P$, $\overline{PR} = 15$ and $\angle QPR = 120°$

Find the length of $\overset{\frown}{QR}$

$\overset{\frown}{QR}$ is part of the circumference ($2\pi r$)

$C = 2\pi(15) = 30\pi$

$m\overset{\frown}{QR} = \frac{120^\circ}{360^\circ} = \frac{1}{3}$

$m\overset{\frown}{QR} = \frac{1}{3}(30\pi) = 10\pi$

30π: circumference