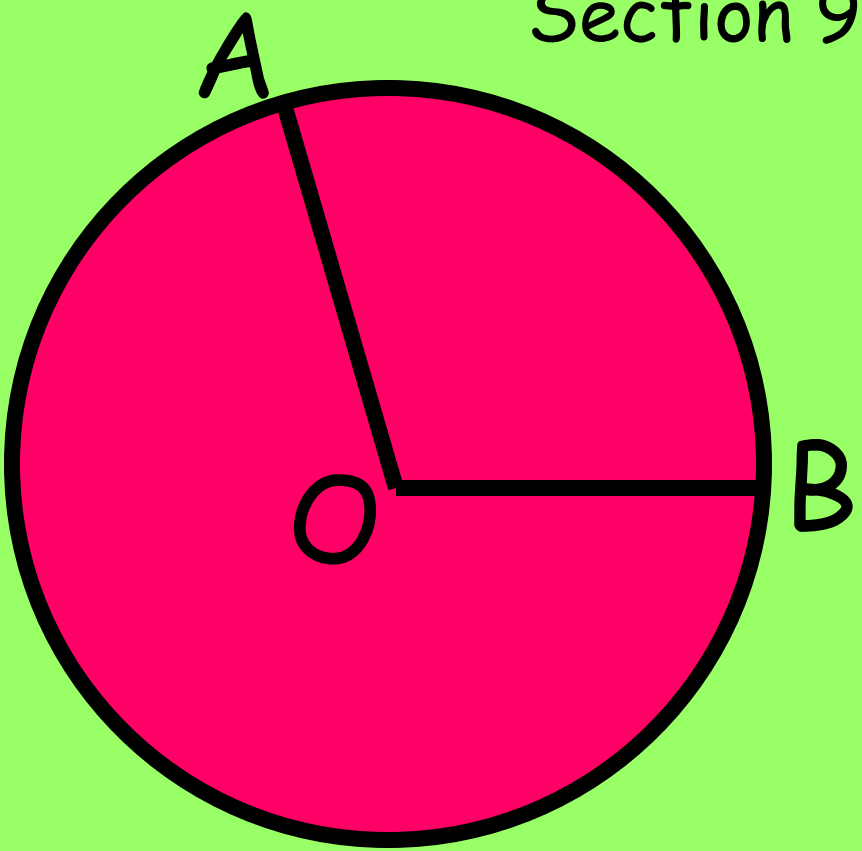
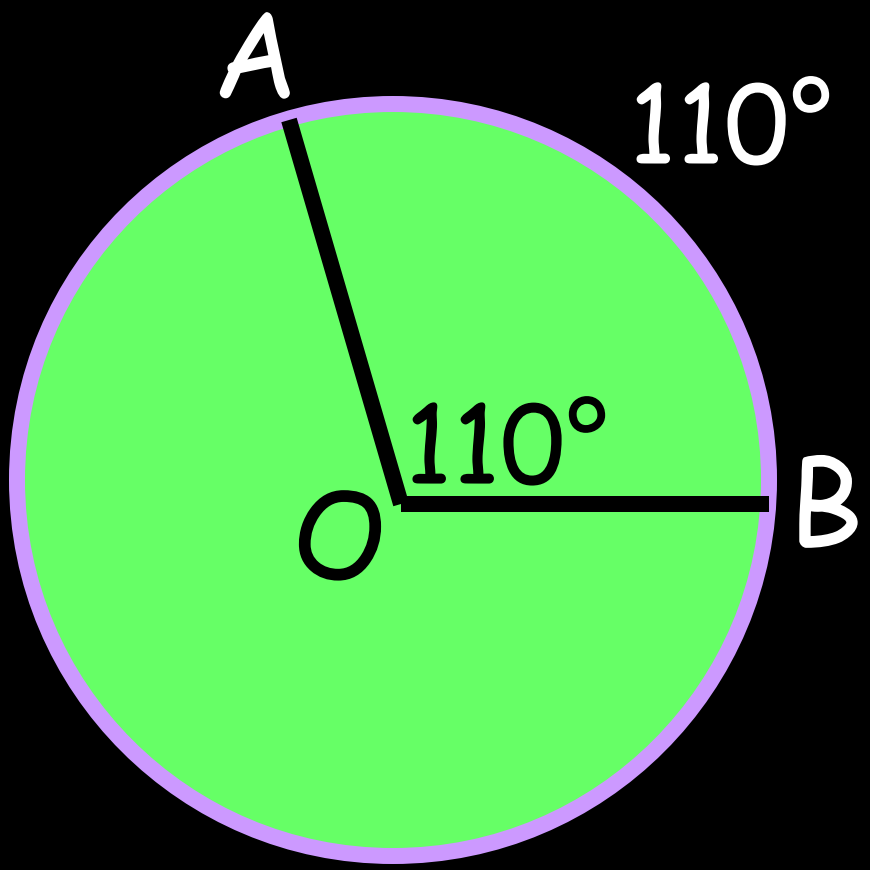


$\angle AOB$ is a central angle of circle O.

Central Angle: an angle with its vertex at the center of the circle.

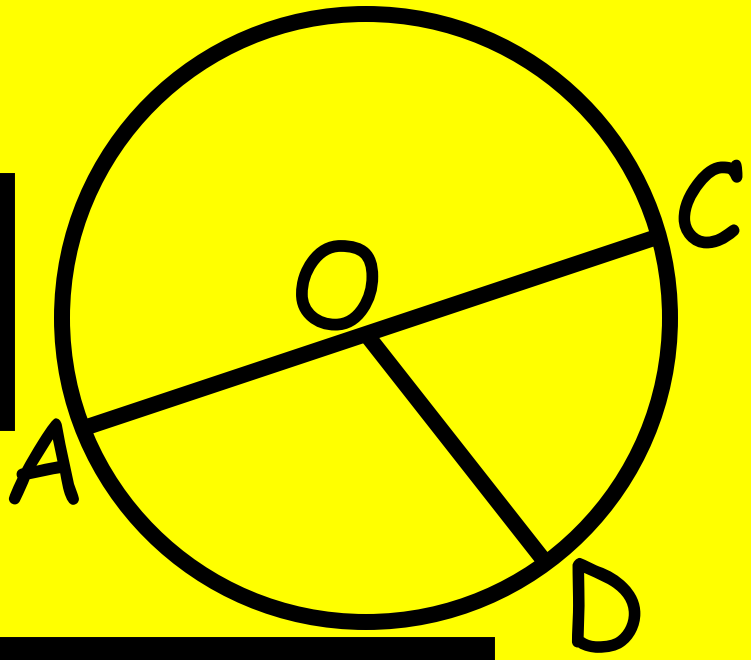


Arcs are measured in **degrees**, like angles. The measure of the **intercepted** arc of a central angle is **equal** to the measure of the **central angle**.

This central angle intercepts an arc of circle O.

Arc: $\overset{\frown}{AB}$ is an unbroken part of a circle.

Types of arcs:



Minor Arc – measures less than 180°

Example: $\overset{\frown}{AD}$

Major Arc – measures more than 180°

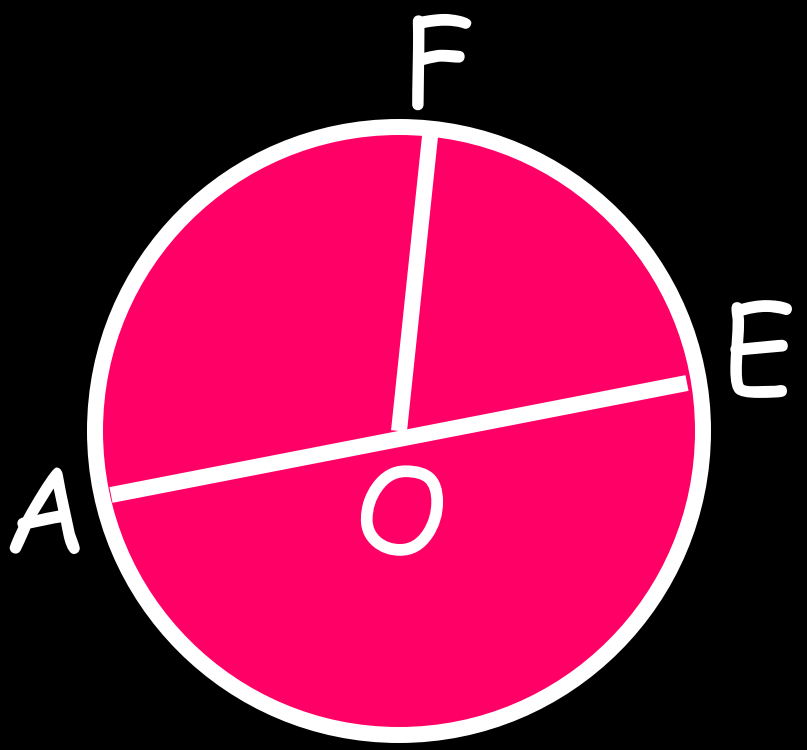
Example: $\overset{\frown}{ACD}$

Semicircle – measures exactly 180°

Example: $\overset{\frown}{ADC}$

Major Arcs and Semicircles are ALWAYS named with 3 letters.

Adjacent Arcs: Two arcs that share a common endpoint, but do not overlap.



$\overset{\frown}{AF}$ and $\overset{\frown}{FE}$ are adjacent arcs.

$\overset{\frown}{EF}$ and $\overset{\frown}{FAE}$ are adjacent arcs.

Name…

1. Two minor arcs

$\overset{\frown}{VW}$, $\overset{\frown}{WY}$

2. Two major arcs

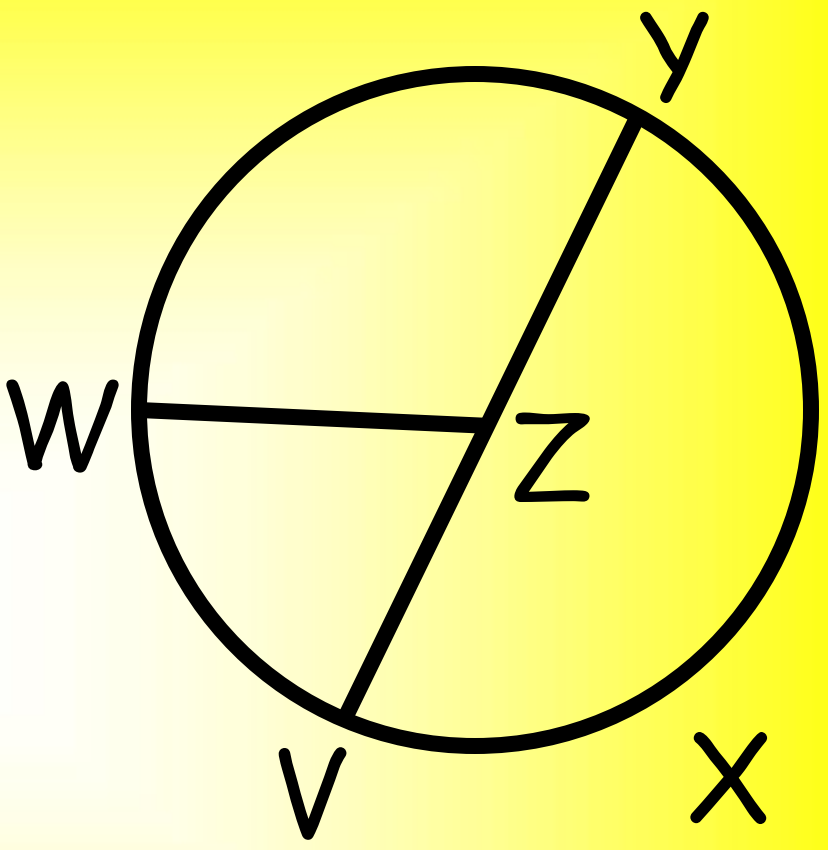
$\overset{\frown}{VYW}$, $\overset{\frown}{XYV}$, $\overset{\frown}{WVY}$

3. Two semicircles

$\overset{\frown}{VWY}$, $\overset{\frown}{VXY}$

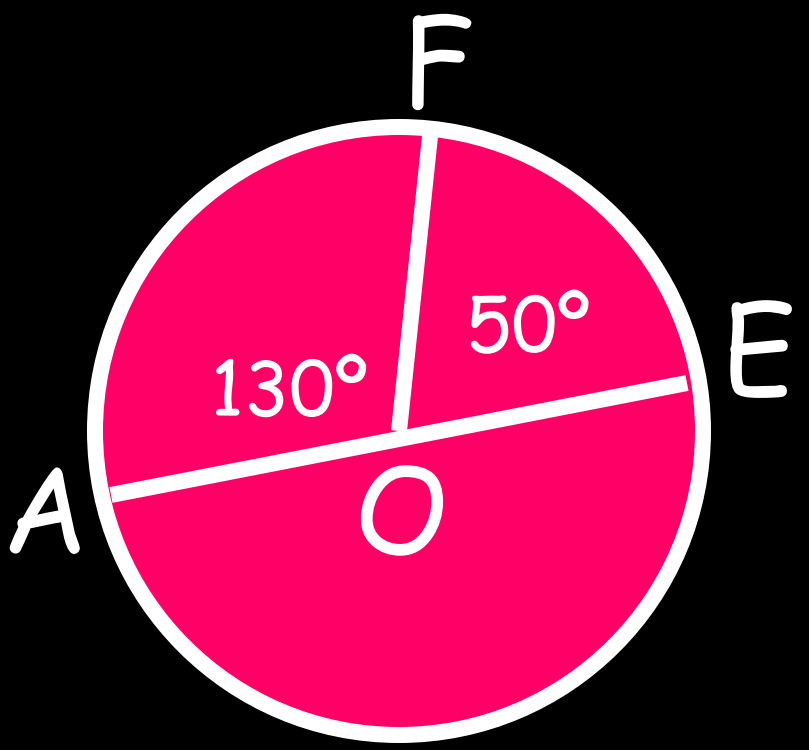
4. Two adjacent arcs

$\overset{\frown}{VW}$ & $\overset{\frown}{WY}$ or $\overset{\frown}{YXV}$ & $\overset{\frown}{VW}$



Circle Z

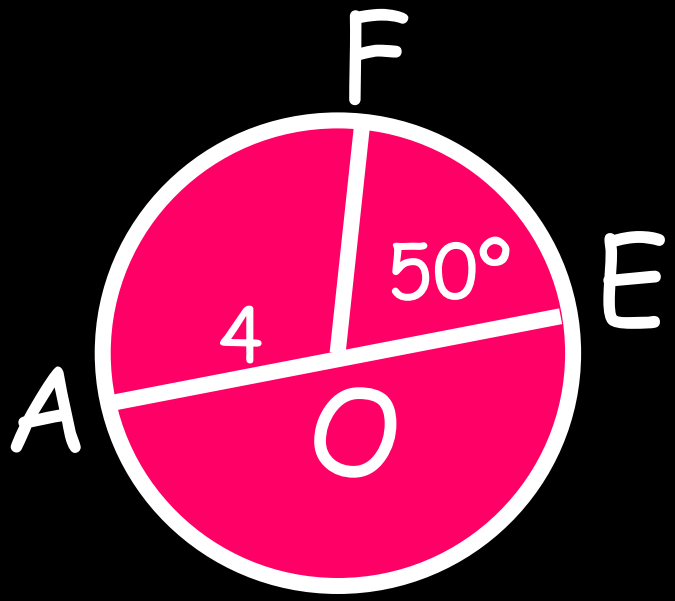
Arc Addition Postulate- The measures of the arc formed by two adjacent arcs is the sum of the measure of these two arcs.

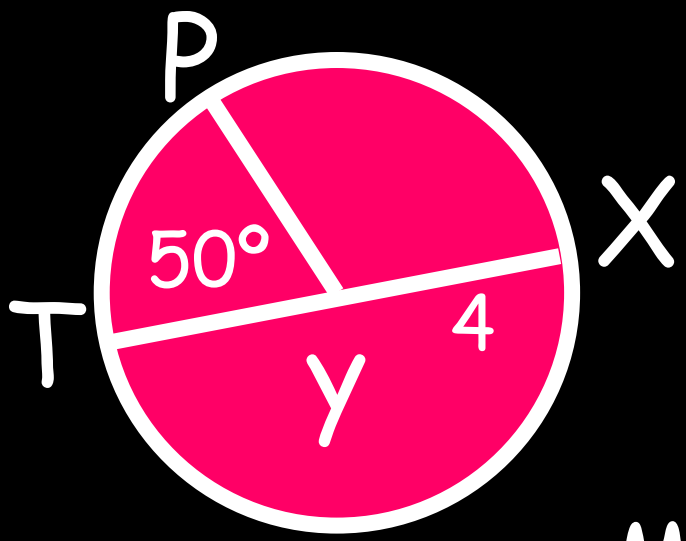


$\overset{\frown}{AF} + \overset{\frown}{FE} = \overset{\frown}{EFA}$

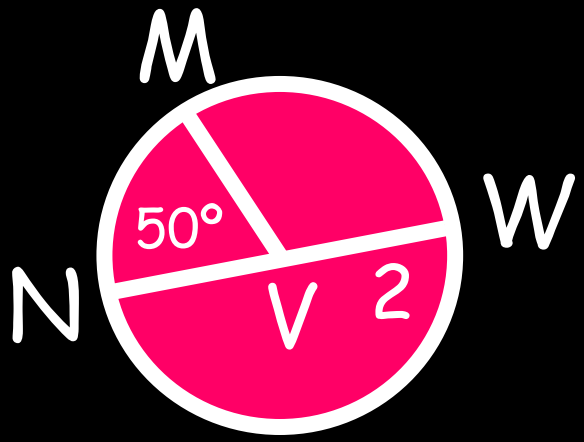
$50° + 130° = 180°$

Congruent Arcs: Arcs, in the same circle or in congruent circles, that have the same measure.



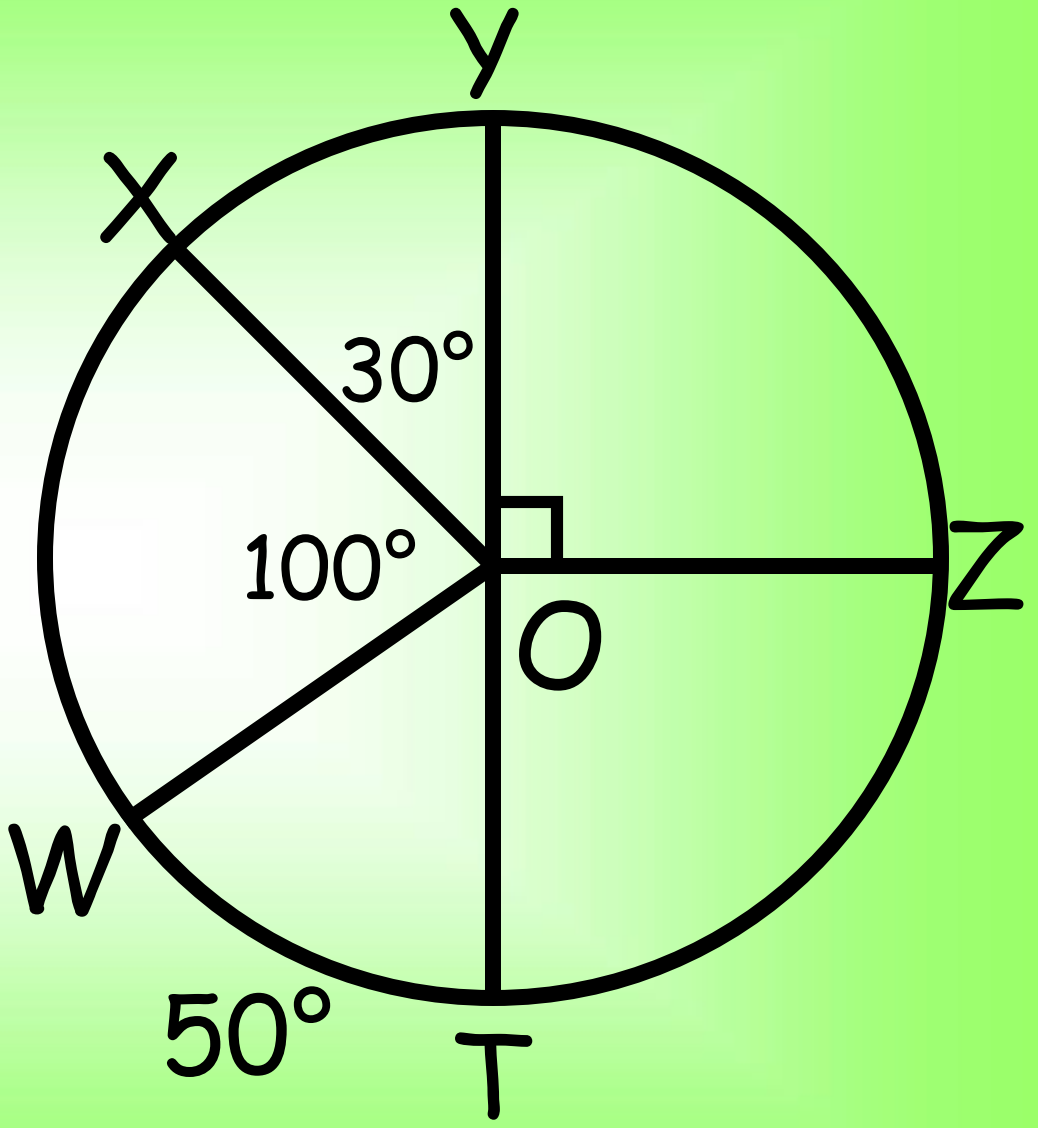


Not Congruent!!!!



Give the measure of each angle or arc.

1. $\angle WOT = 50°$
2. $\overset{\frown}{WX} = 100°$
3. $\overset{\frown}{YZ} = 90°$
4. $\overset{\frown}{YZX} = 330°$
5. $\overset{\frown}{XYT} = 210°$
6. $\overset{\frown}{WYZ} = 220°$
7. $\overset{\frown}{WZ} = 140°$



Find the measure of the angle between the hands of a clock that reads 8:00.

There are 12 sections on the clock. You must divide the 360 evenly between the 12 sections. How many degrees are between each two numbers?

360/12 = 30°.

If the hands are on the 8 and the 12, you must count that 30° 4 times.

Answer: 120°