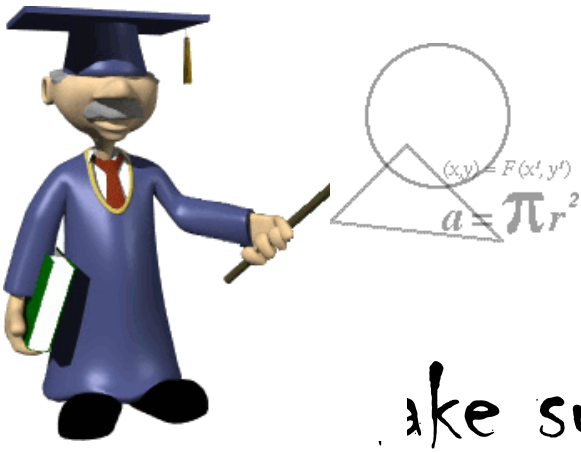
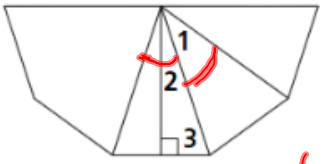


Good Morning!

ake sure ur rdy2go

when the bell rings!

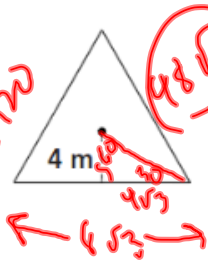
Use the portion of the regular decagon for Exercises 1–3.



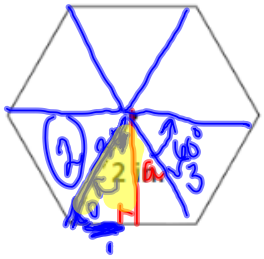
1. Find $m\angle 1$.
2. Find $m\angle 2$.
3. Find $m\angle 3$.
4. Find the area of a regular 9-sided figure with a 9.6-cm apothem and 7-cm side.

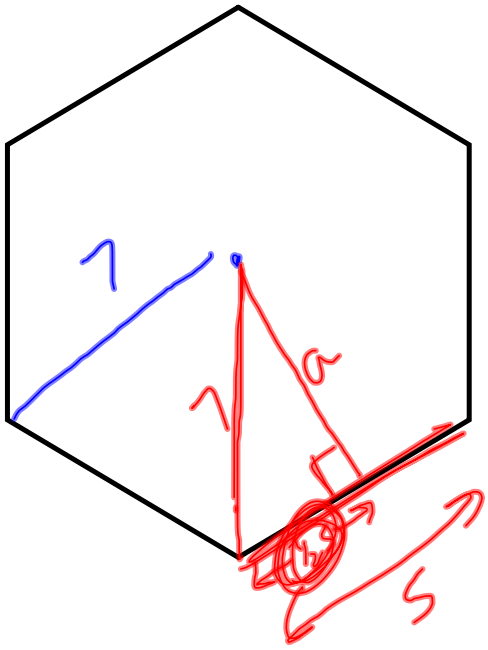
For Exercises 5 and 6, find the area of each regular polygon. Leave your answer in simplest radical form.

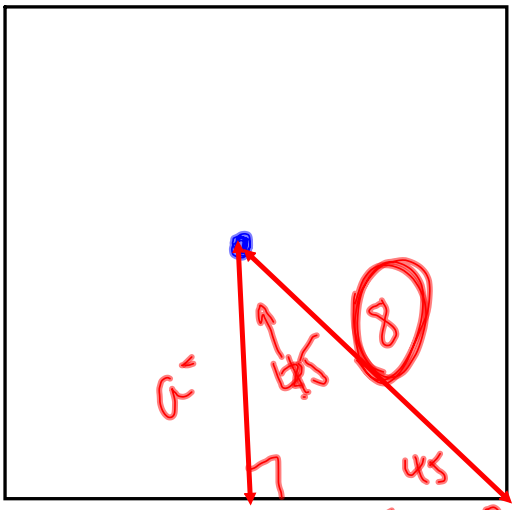
5.



6.




r
r
a
s



$A = 4$

$a = 4\sqrt{2}$

$s = 8\sqrt{2}$

$m\angle = \frac{360}{4} = 90$ (n.s)

$a = \frac{8}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{8\sqrt{2}}{2} = 4\sqrt{2}$

$p = 32\sqrt{2}$

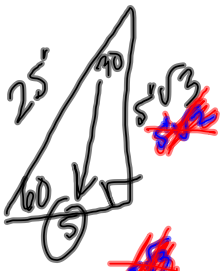
$A = \frac{1}{2}(4\sqrt{2})(32\sqrt{2})$

$64 \cdot 2$

128

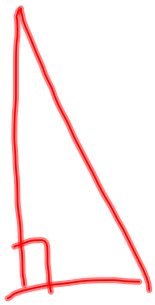
① Pythag Thm $a^2 + b^2 = c^2$ need 2 sides

② 30-60-90 s $s\sqrt{3}$ $2s$



③ 45-45-90 s s $s\sqrt{2}$

need 1 side



How would you define circle congruence?

Defn: Circle congruence

Circle with $\cong$ radii.

Defn: Circle congruence

Circle with $\cong$ radii.

Defn: Center $\angle$

Defn: Circle congruence

Circle with $\cong$ radii.

Defn: Center $\angle$

$\angle$ whose vertex is center of $\odot$

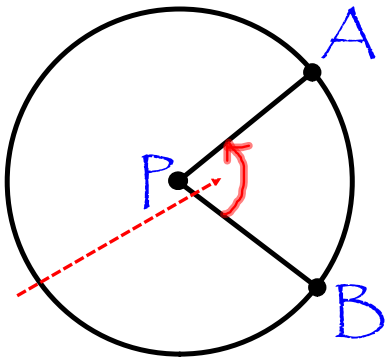
Defn: Circle congruence

Circle with ≅ radii.

Defn: Center ∠

∠ whose vertex is center of ⊙

∠APB is center ∠



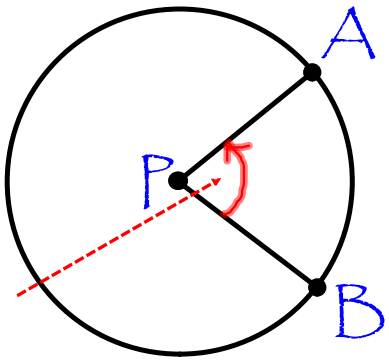
Defn: Circle congruence

Circle with ≅ radii.

Defn: Center ∠

∠ whose vertex is center of ⊙

Example: pie charts



∠APB is center ∠

Defn: Circle congruence

Circle with ≅ radii.

Defn: Center ∠

∠ whose vertex is center of ⊙

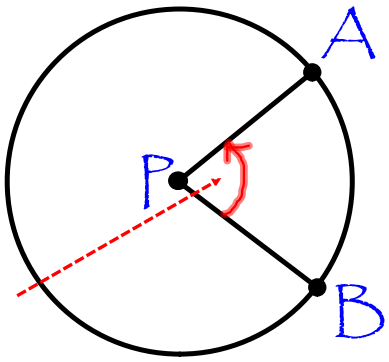
Example: pie charts

Pg 389 #2-8 even

2) 29
4) 14
6) 43

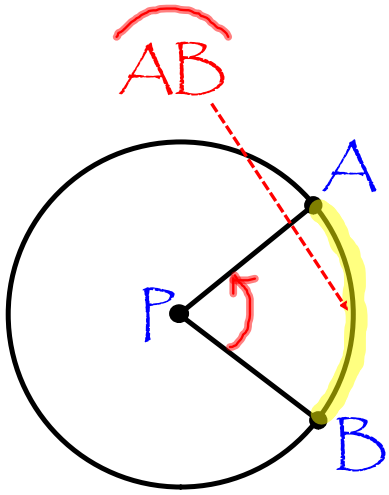
∠APB is center ∠

8) 137



Defn: Arc

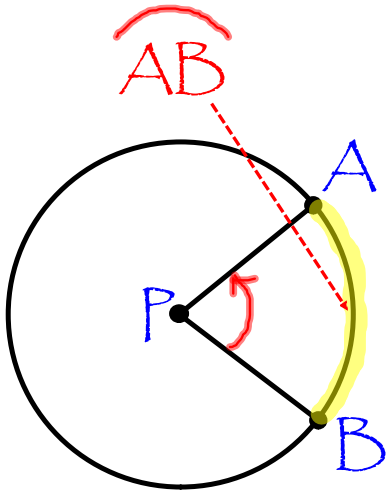
Part of a circle around the edge.



Defn: Arc

Part of a circle around the edge.

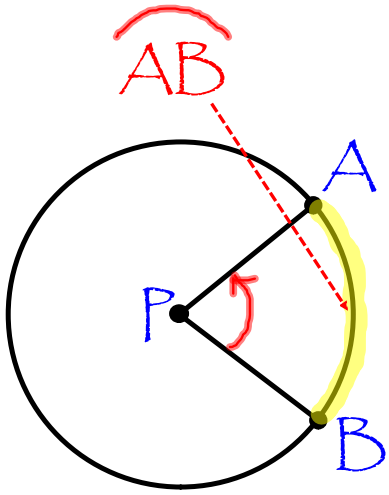
Named by at least 2 endpts.



Defn: Arc

Part of a circle around the edge.

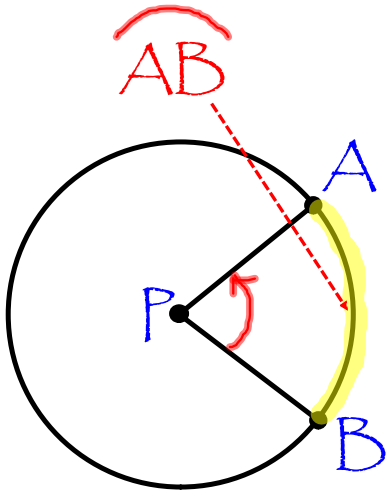
Named by at least 2 endpts.



Defn: Arc

Part of a circle around the edge.

Named by at least 2 endpts.



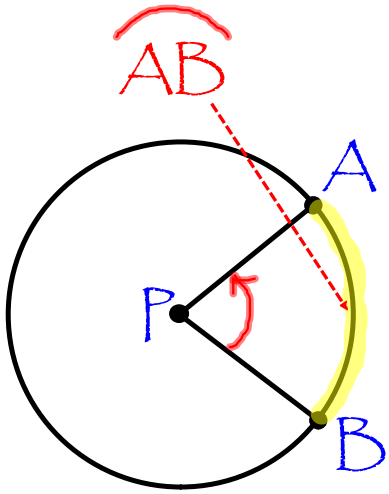
Defn: Measure of an arc

Equal to measure of center ∠

Defn: Arc

Part of a circle around the edge.

Named by at least 2 endpts.



Defn: Measure of an arc

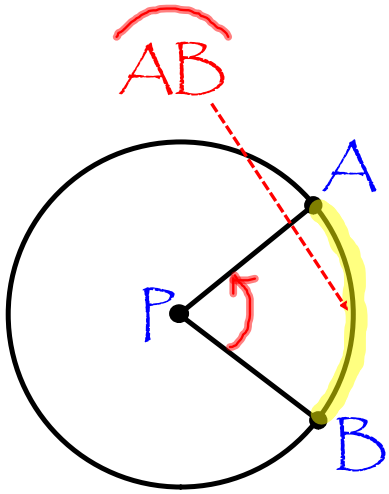
Equal to measure of center $\angle$

$m\angle APB = m\overset{\frown}{AB}$

Defn: Arc

Part of a circle around the edge.

Named by at least 2 endpts.



Defn: Measure of an arc

Equal to measure of center ∠

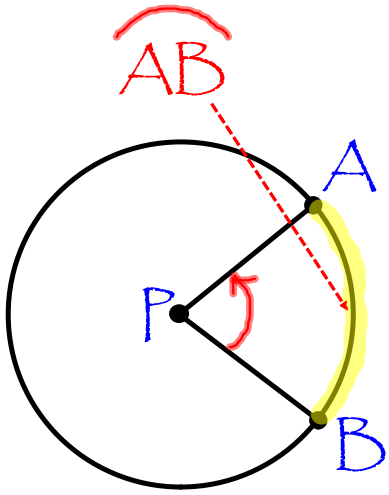
$m\angle APB = m\overset{\frown}{AB}$

...degree measure...

Defn: Arc

Part of a circle around the edge.

Named by at least 2 endpts.



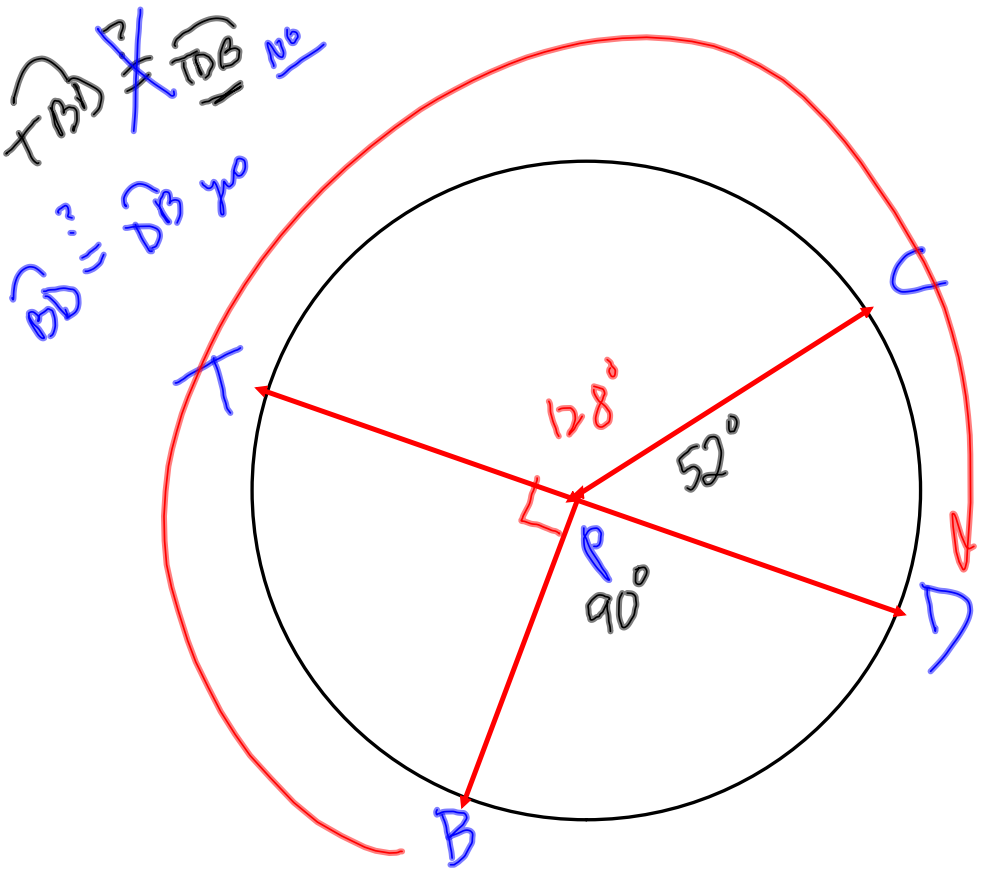
Defn: Measure of an arc

Equal to measure of center ∠

$m\angle APB = m\overset{\frown}{AB}$

...degree measure...

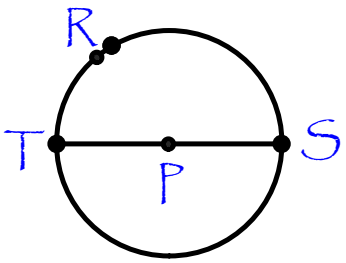
Pg 390 #16-26 even


T
C
D
B
P
128°
52°
90°

Defn: Semi circle

Defn: Semi circle

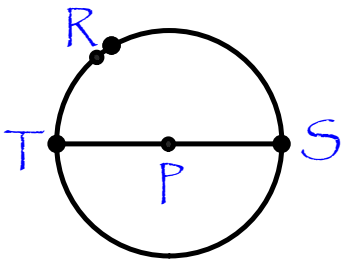
Arc going $^1/_2$ way around ⊙



Defn: Semi circle

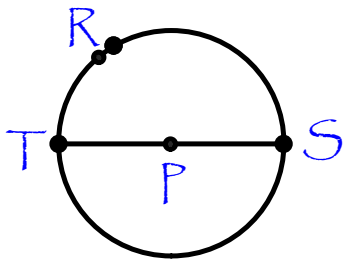
Arc going $^1/_2$ way around $\odot$

Endpts are _____



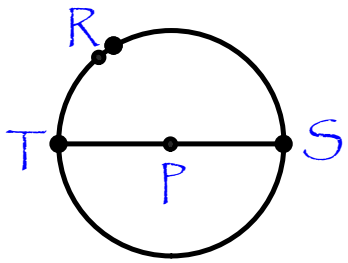
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter



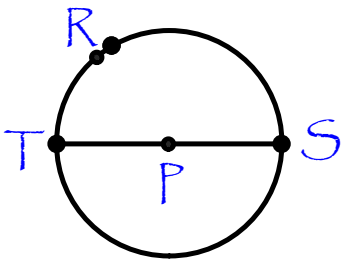
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = _____



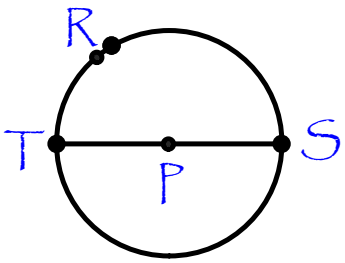
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



Defn: Semi circle

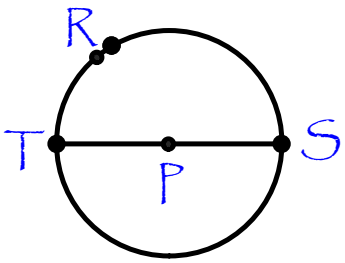
Arc going $^1/_2$ way around $\odot$
Endpts are diameter
Measure = 180



Defn: Minor arc

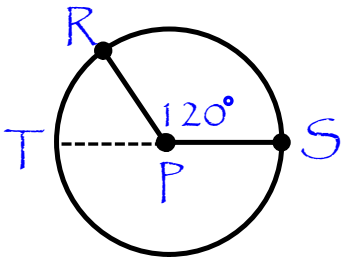
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



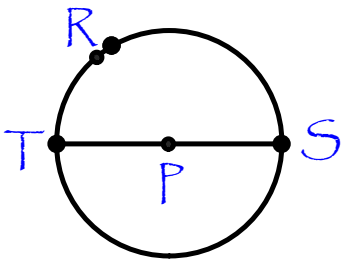
Defn: Minor arc

Measure < semi-circle



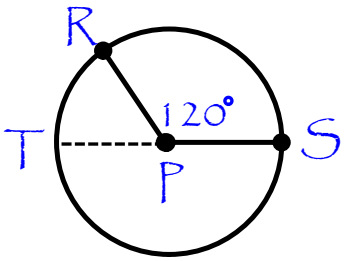
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



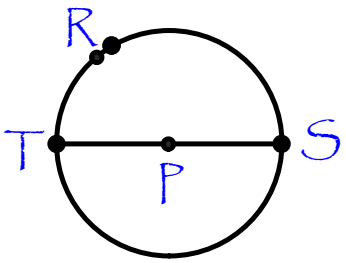
Defn: Minor arc

Measure < semi-circle
Measure <_____



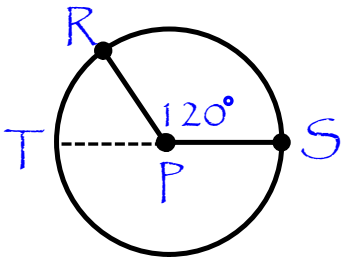
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



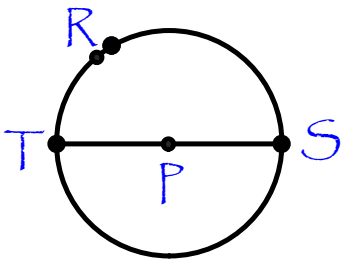
Defn: Minor arc

Measure < semi-circle
Measure < 180



Defn: Semi circle

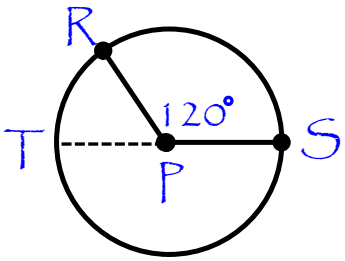
Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



Defn: Minor arc

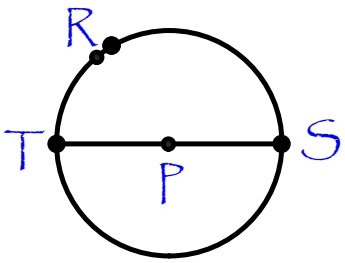
Measure < semi-circle
Measure < 180

Defn: Major arc



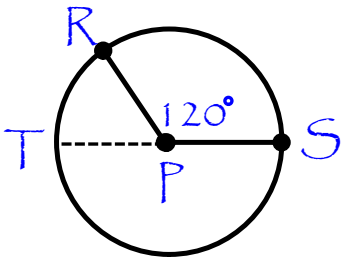
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



Defn: Minor arc

Measure < semi-circle
Measure < 180

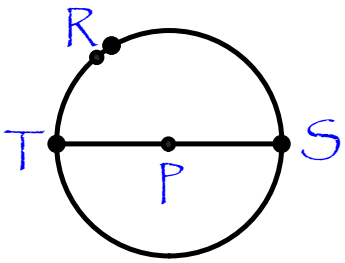


Defn: Major arc

Measure > semi-circle

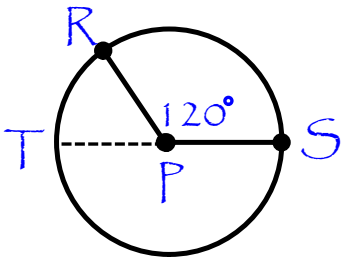
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



Defn: Minor arc

Measure < semi-circle
Measure < 180

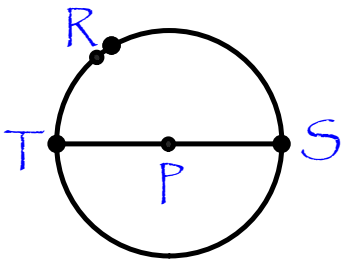


Defn: Major arc

Measure > semi-circle
Measure > _____

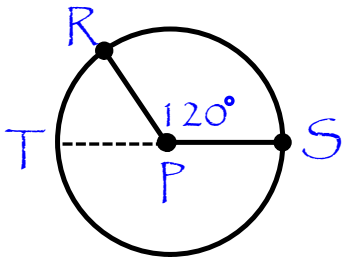
Defn: Semi circle

Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180



Defn: Minor arc

Measure < semi-circle
Measure < 180



Defn: Major arc

Measure > semi-circle
Measure > 180

Defn: Semi circle

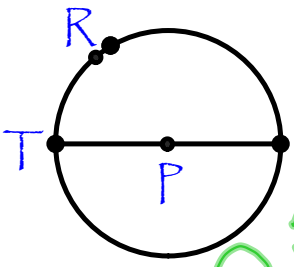
Arc going $^1/_2$ way around ⊙
Endpts are diameter
Measure = 180

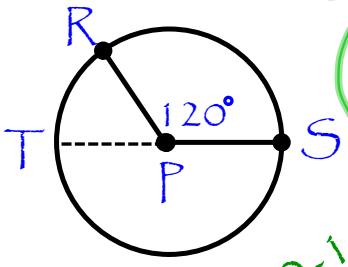
Defn: Minor arc

Measure < semi-circle
Measure < 180

Defn: Major arc

Measure > semi-circle
Measure > 180



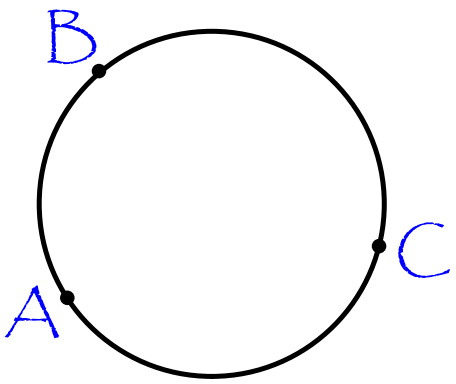


Pg 390 #10-14 even

Post 7-1: Arc Addition Postulate

You can add the measures of adjacent arcs.

...the arcs must share an endpt!

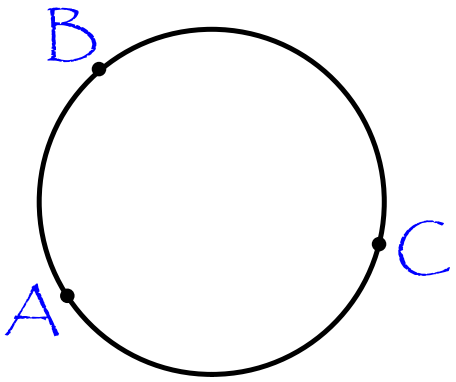


Post 7-1: Arc Addition Postulate

You can add the measures of adjacent arcs.

...the arcs must share an endpt!

$$m\overset{\frown}{ABC} = m\overset{\frown}{AB} + m\overset{\frown}{BC}$$



Thm 7-13: Circumference of a circle

$$c = \pi d = 2\pi r$$

Thm 7-13: Circumference of a circle

$$c = \pi d = 2\pi r$$

Pg 390 #28-32 even

(28) 6π ft

(30) 14π in

(32) 58π cm

Defn: Concentric circles

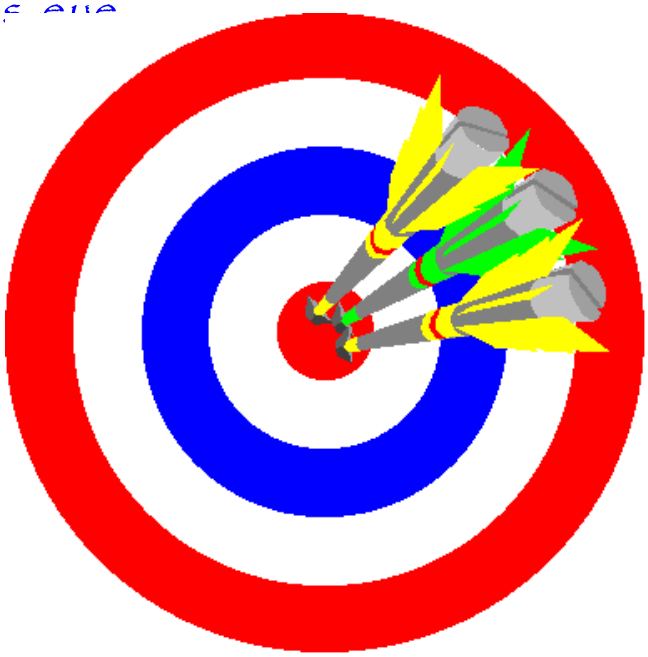
Coplanar ⊙'s that share same centers.

Example:

Defn: Concentric circles

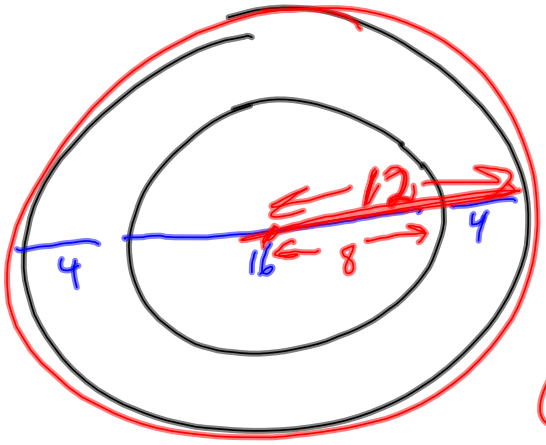
Coplanar ⊙'s that share same centers.

Example: target bulls-eye



Example

A circular swimming pool (16' diam) will be enclosed in a circular fence whose radius is 4ft longer than the radius of the pool. What length of fencing is needed? Round to the tenth.



$r = 12$

$C = 2\pi r$

$= 24\pi$

$= 75.4$

OR

$d = 16 + 8 = 24$

$C = \pi d$

$= 24\pi$

$= 75.4$

1

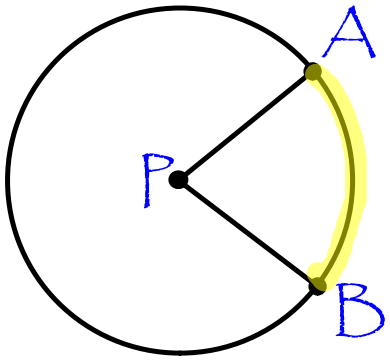
Recall...

Measure of an arc ... degrees, $\angle$ measure ... m $\overset{\frown}{AB}$

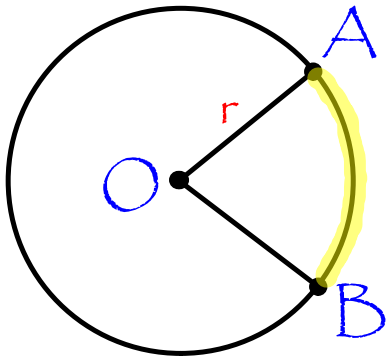
Defn: Arc Length

The distance around the edge of the $\odot$ marked by the arc.

Denoted by len $\overset{\frown}{AB}$



How would you determine arc length? (formula)

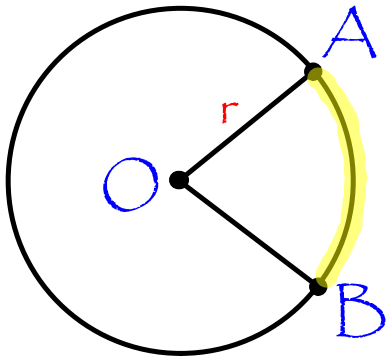


Thm 7-14: Arc length

$$\text{len}\overset{\frown}{AB} = \frac{m\overset{\frown}{AB}}{360} \cdot 2\pi r$$

$\frac{m\overset{\frown}{AB}}{360}$: % of circum used

$2\pi r$: circum

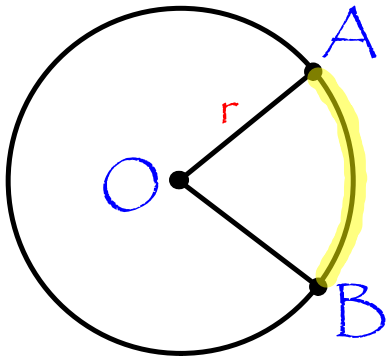


Thm 7-14: Arc length

$$\text{len}\overset{\frown}{AB} = \frac{m\overset{\frown}{AB}}{360} \cdot 2\pi r$$

Pg 390 #34-38 even

34) $\frac{7\pi}{2}$ or 3.5π



Defn: ≅ arcs

Both

$\text{len}\overset{\frown}{AB} = \text{len}\overset{\frown}{XY}$

and

$m\overset{\frown}{AB} = m\overset{\frown}{XY}$

Practice: Pg 390 #34-38

L7-6 Homework Problems

Pg 389 #1-39 odd,

42-47, 49-53,

55-59, 61-66