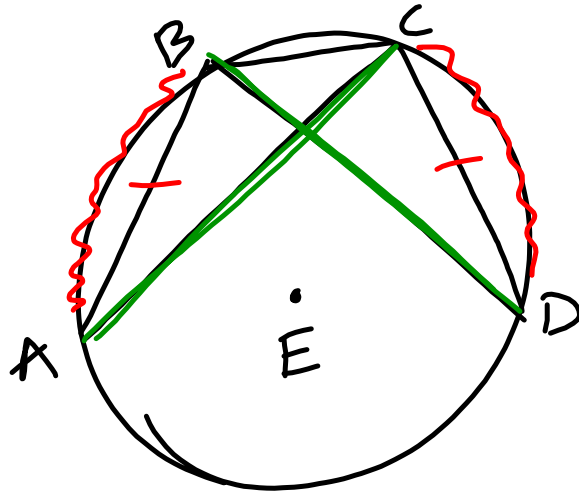
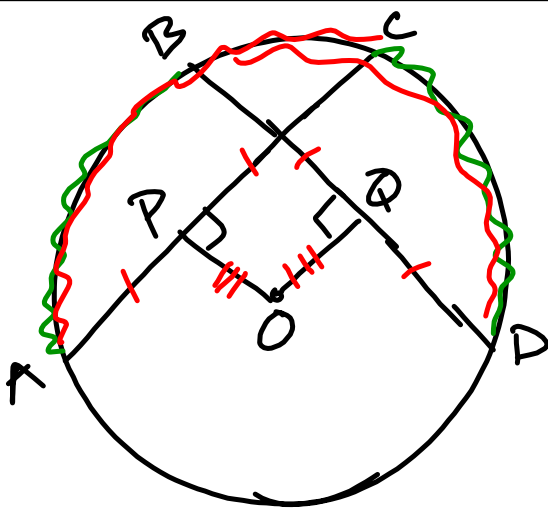


S	R
①	① G
② $\widehat{AB} \cong \widehat{CD}$	② \cong chords ↓ \cong arcs
③ $\widehat{CB} \cong \widehat{CB}$	③ Reflexive Prop.
④ $\widehat{AC} \cong \widehat{BD}$	④ Subtraction



S	R
①	①
② $\widehat{AB} \cong \widehat{CD}$	② $\cong \text{chords} \rightarrow \cong \text{arcs}$
③ $\widehat{BC} \cong \widehat{BC}$	③ Reflexive
④ $\widehat{AC} \cong \widehat{BD}$	④ Addition Prop.
⑤ $\overline{AC} \cong \overline{BD}$	⑤ $\cong \text{arcs} \rightarrow \cong \text{chords}$



② $\overline{AC} \cong \overline{BD}$

⑦ $\widehat{AC} \cong \widehat{BD}$

④ $\widehat{BC} \cong \widehat{AD}$

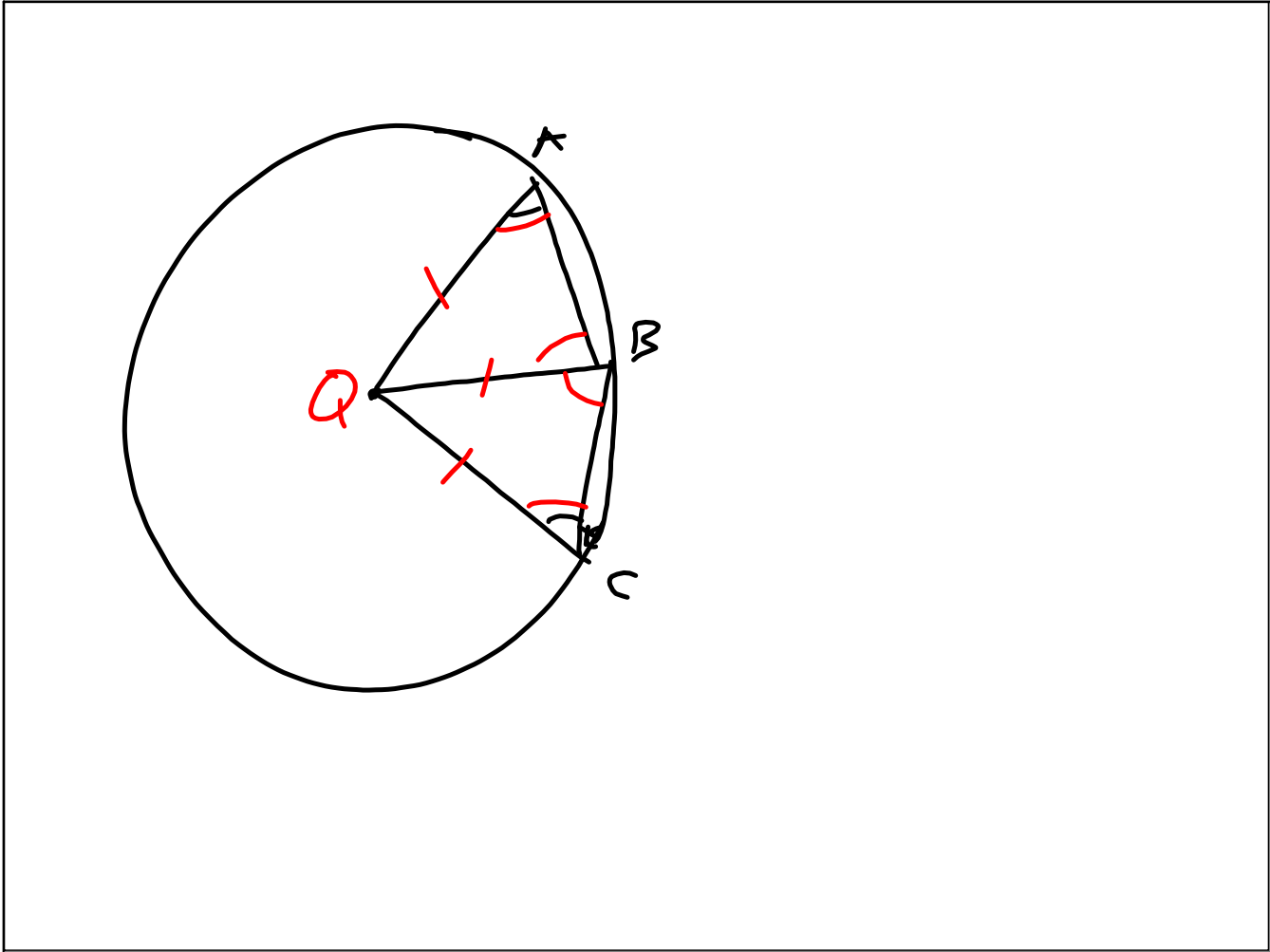
③ $\widehat{AB} \cong \widehat{DC}$

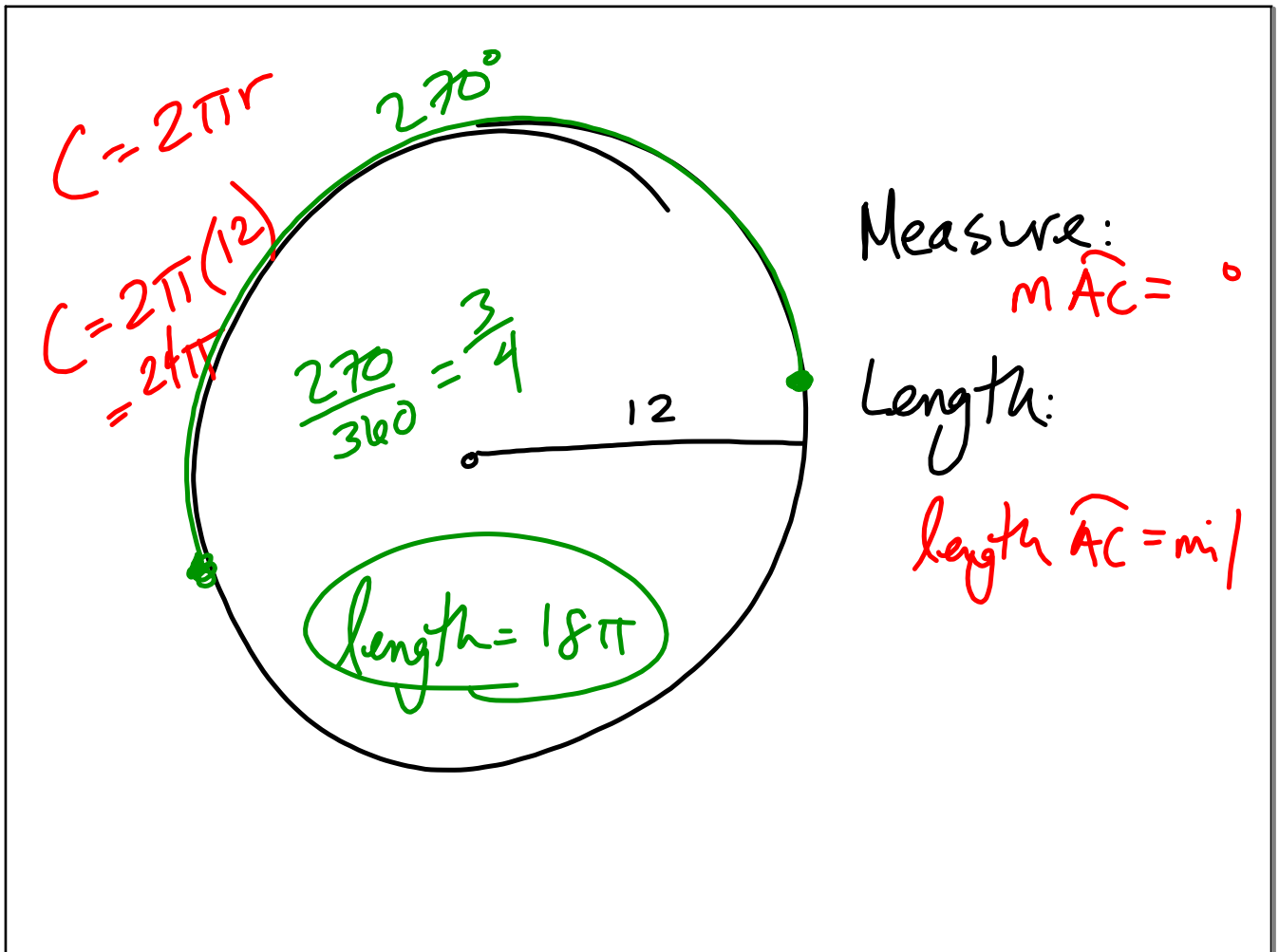
② 2 equidistant chords are \cong

③ if chords $\cong \rightarrow$ arcs \cong

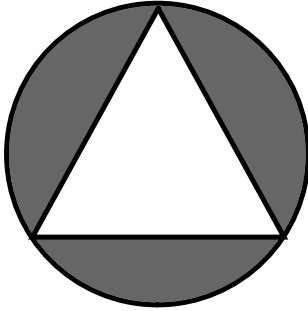
④ Reflexive

⑤ Subtraction

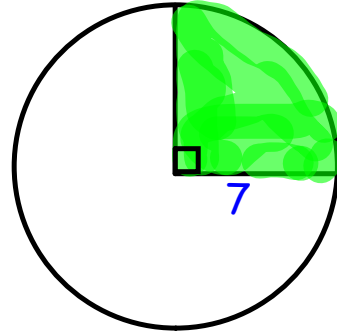




1. Explain how to find the area of the shaded region

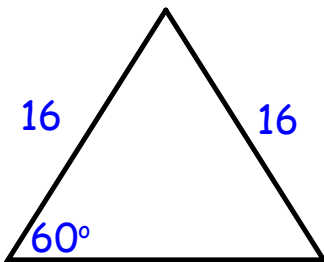


2. Find the area of the highlighted region

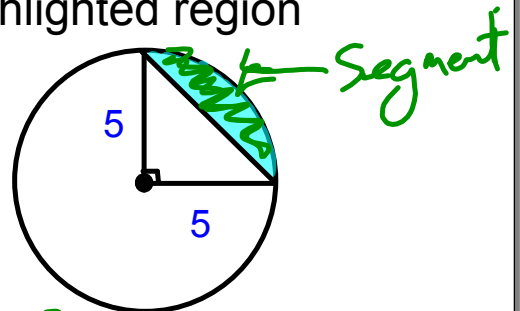


Find the area of each triangle

3.



4. Find the area of the highlighted region

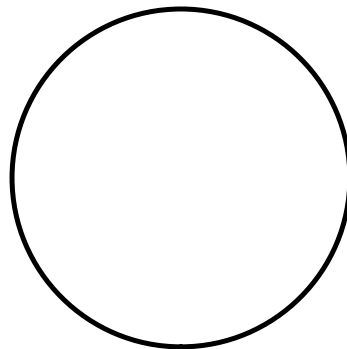


$$A_{\text{circle}} = \frac{25\pi}{4}$$

$$A_{\text{sector}} = 6.25\pi$$

$$A_{\Delta} = \frac{1}{2}b \cdot h = \frac{1}{2}(5)(5) = 12.5$$

$$A_{\text{segment}} = 6.25\pi - 12.5$$



Important Circle Formulas

$$A = \pi r^2 \quad C = 2\pi r$$

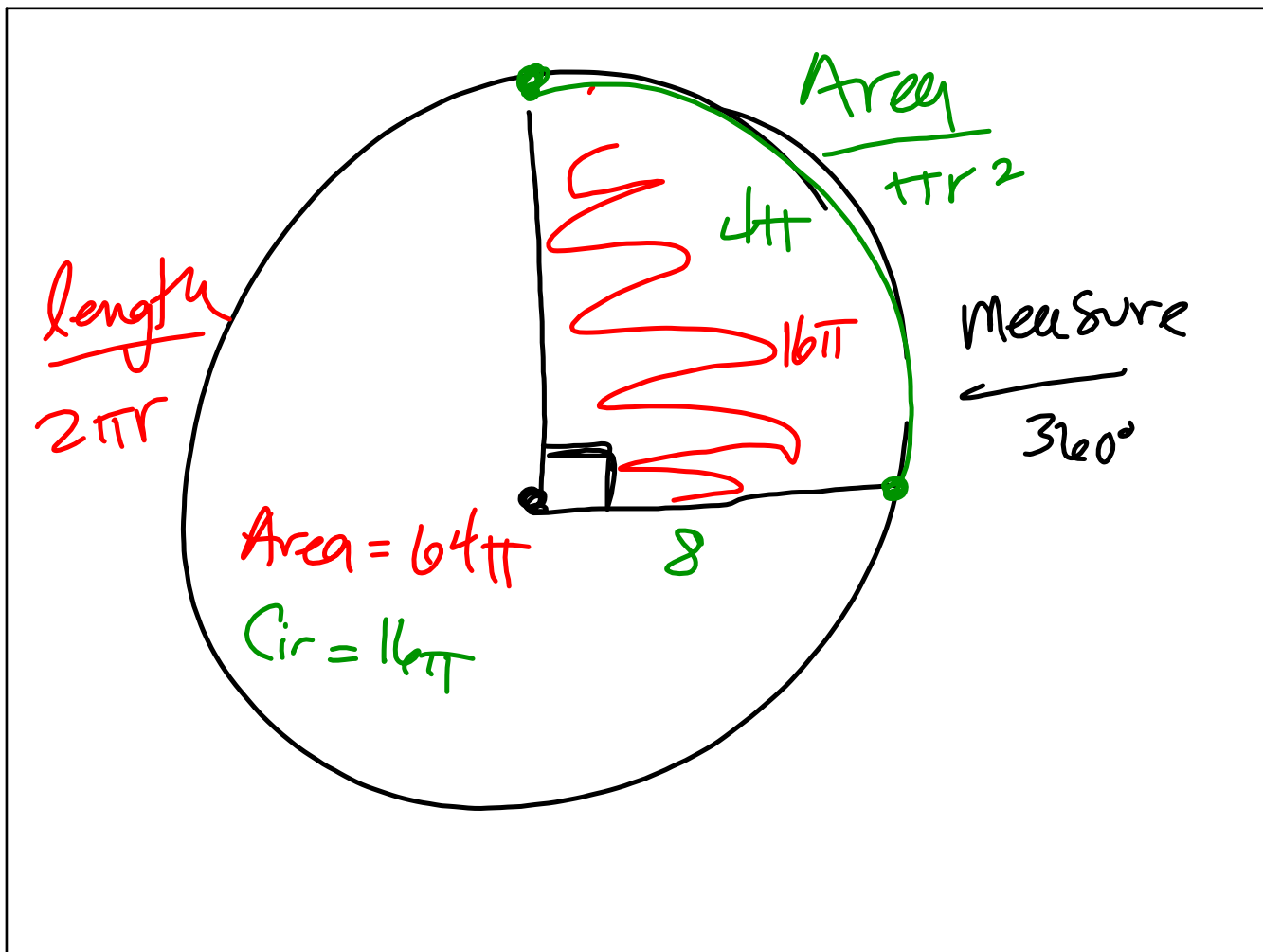
$$\text{length of arc PQ} = \left(\frac{m \text{ arc PQ}}{360} \right) 2\pi r \quad \text{OR} \quad \frac{\text{length of arc PQ}}{2\pi r} = \frac{m \text{ arc PQ}}{360}$$

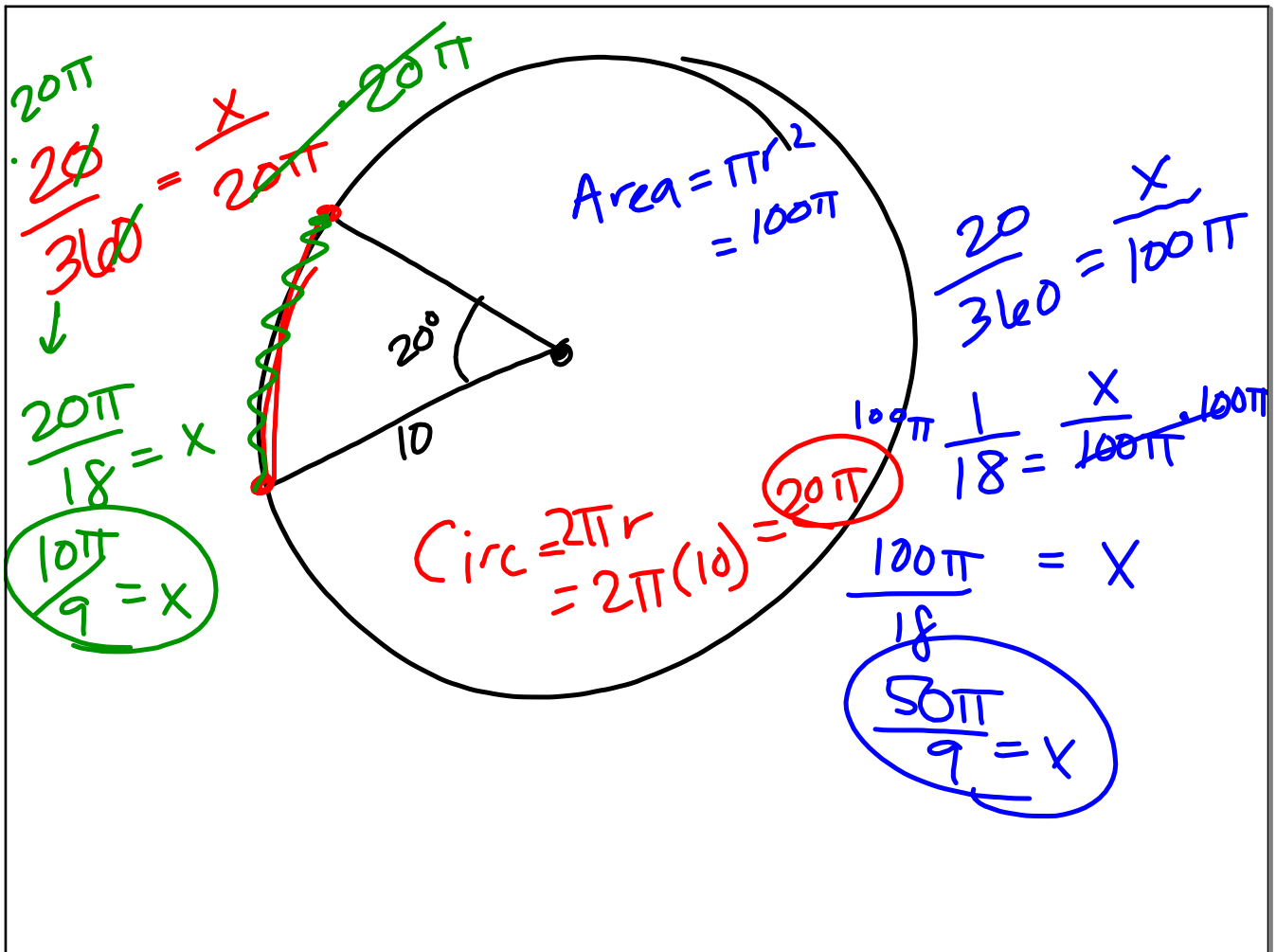
Good ↗ Great

$$A_{\text{sector}} = \left(\frac{\text{measure of arc}}{360} \right) \pi r^2 \quad \text{OR} \quad \frac{A_{\text{sector}}}{\pi r^2} = \frac{\text{measure of arc}}{360}$$

These should already be in your index cards...are they?????

$$A(\text{segment}) = A(\text{sector}) - A(\Delta) \quad \text{⊙}$$





Find the length of AB

Find area of sector AB

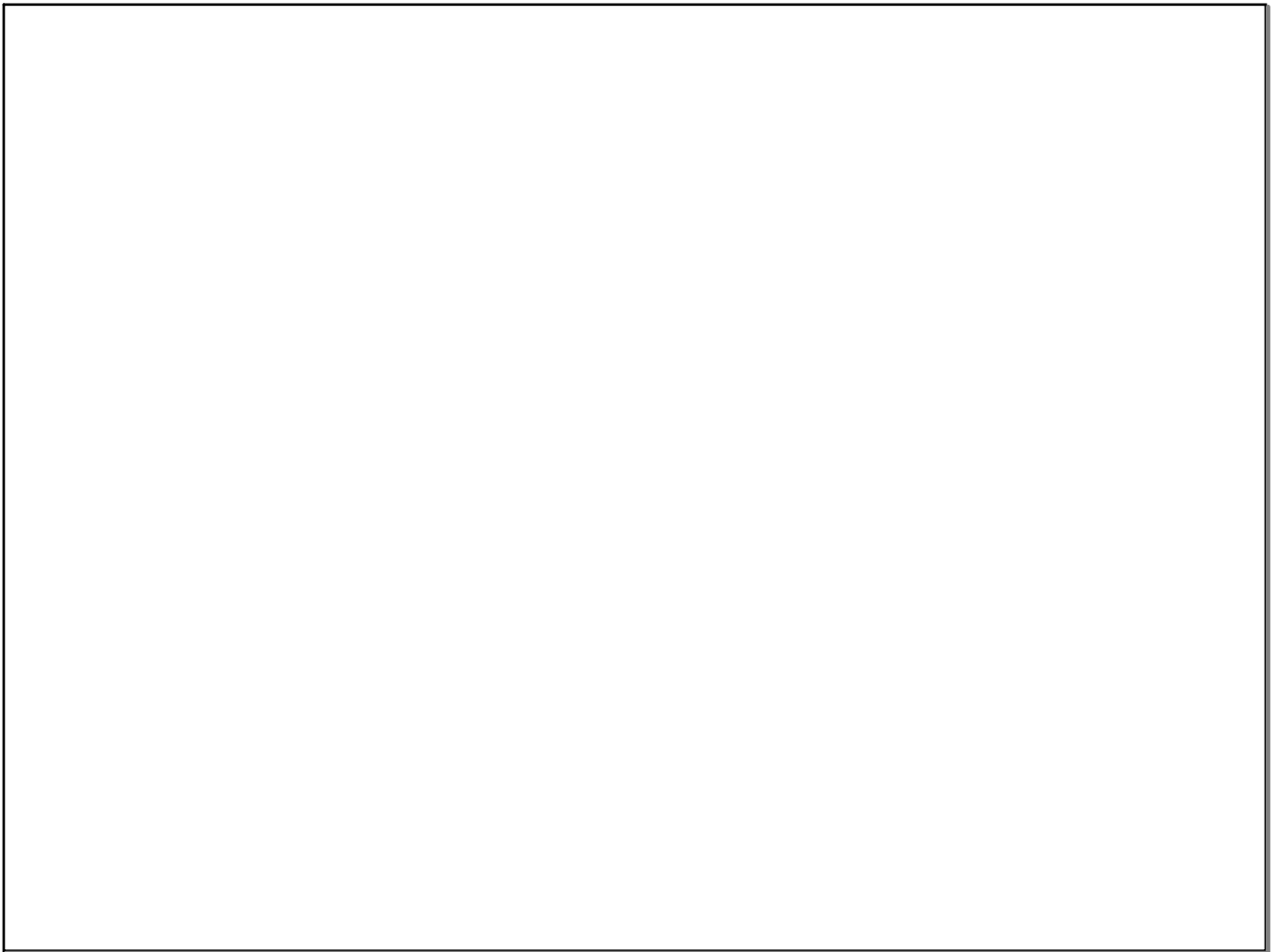
$\frac{60}{360} = \frac{x}{2\pi}$

$\frac{60}{360} = \frac{x}{12\pi}$

$36\pi \cdot \frac{60}{360} = \frac{x}{\cancel{36\pi}} \cdot 36\pi$

$36\pi \cdot \frac{1}{6} = x$

$6\pi = x$



Stations

- 1) Go to your assigned station and work the problem on your own paper.
- 2) Go to the next station when you are instructed to do so and work that problem.
- 3) Continue until you complete all 15 problems.
- 4) Turn in your paper when finished and begin working on the Classwork.

Classwork

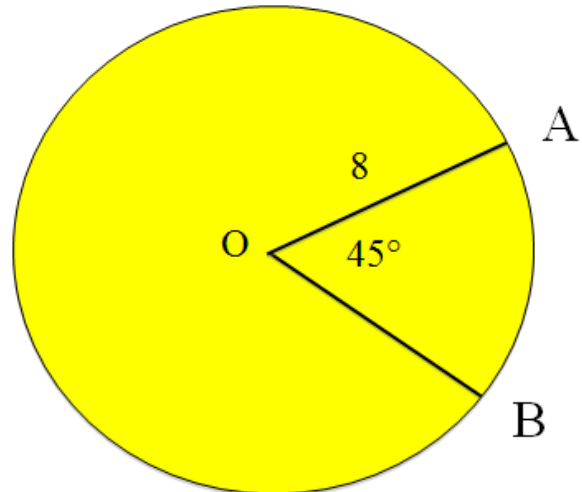
- p. 501 #3, 4, 6-8, 10, 11
- p. 539 #5, 6, 10, 11, 13, 14, 16

Homework

- Finish the classwork (if you didn't in class)
- Watch "Completing the Square" video and take notes!

Example 1

Find the circumference of circle O and the length of arc AB



Example 2

Given: $m \text{ arc AB} = 60^\circ$
radius = 12 cm

Find: the length of arc AB

Example 3

The diameter of a bicycle wheel (including the tire) is 70 cm.

A) How far will the bike travel if the wheel rotates 1000 times? (*Approximate the answer in meters*).

Hint: Distance = (#of revolutions)(distance per revolution)

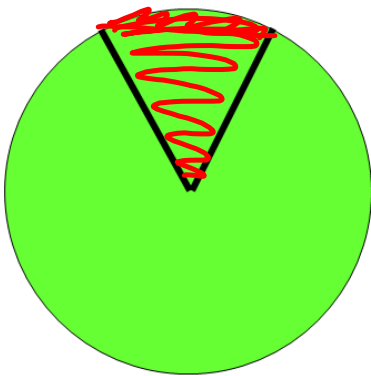
Example 3

The diameter of a bicycle wheel (including the tire) is 70 cm.

- B. How many revolutions will the wheel make if the bike travels 15 m? (*Approximate to the nearest tenth of a revolution*)

Example 4

Find the area of a sector with a radius of 9 and a 60° arc.

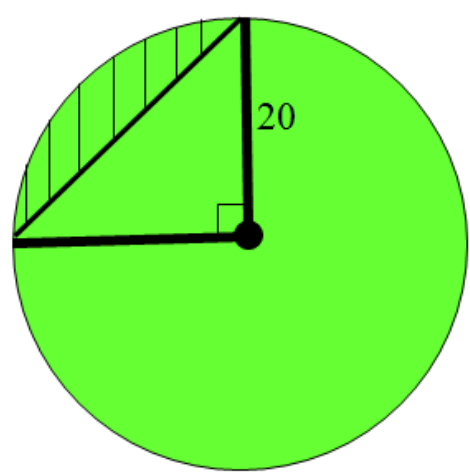


$$\frac{60}{360} = \frac{1}{6} = \frac{x}{81\pi}$$

$$x = 13.5\pi$$

Example 5

Find the area of the segment.



Example 6

Find the area of the segment.

