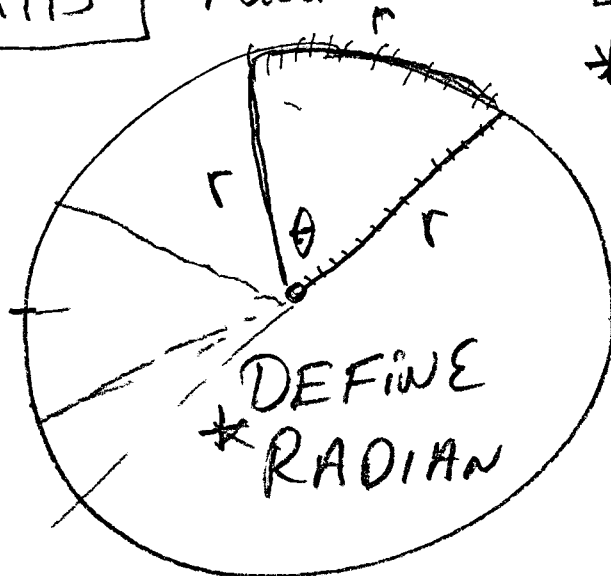


Mth 113

Tues. 1-22-13

CLASS NOTES



* $\theta = 1 \text{ radian}$

$$C = 2\pi r$$

$$\frac{2\pi \text{ rad}}{360 \text{ deg}} =$$

$$\frac{\pi \text{ rad}}{180 \text{ deg}}$$

29

EX

PS 70

Convert rad. to deg.

Exact, \approx to 2 decimal places

$$-5 \text{ rad.} \cdot \frac{180 \text{ deg}}{\pi \text{ rad}} = \boxed{-\frac{900}{\pi} \text{ deg}}$$

$$\approx -286.4788$$

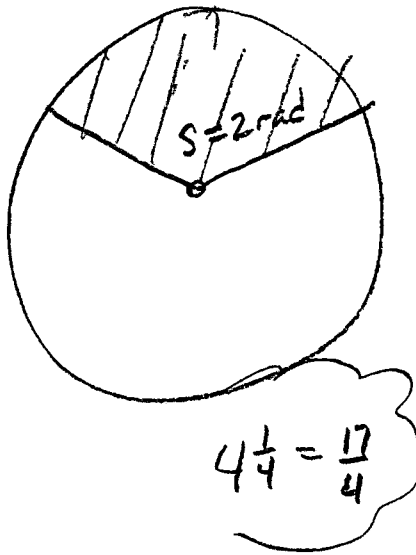
$$\boxed{-286.48 \text{ deg}}$$

Pg 69 \Rightarrow Area of a Sector of \odot

\downarrow angle in rad

$$A_s = \frac{s}{2} r^2$$

Find A_s if $s = 2 \text{ rad}$, $\text{dia} = 8.5''$
 $r = 4.25''$



$$A_s = \frac{2}{2} (4.25)^2$$

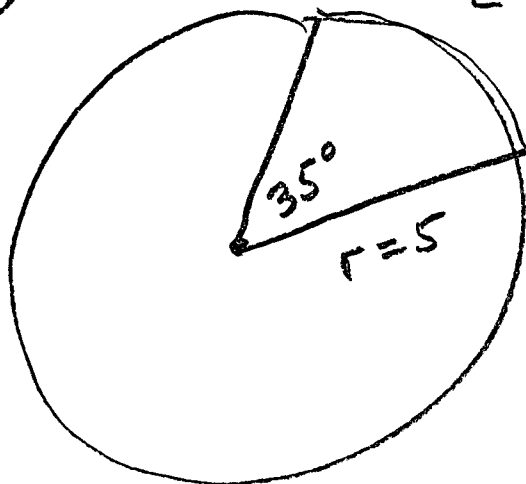
$$= \frac{289}{16}$$

$$= 18.0625$$

$$A_s = 18.06 \text{ in}^2$$

(Ex) Arc Length

$$L = \frac{35\pi}{36} = 3.05$$

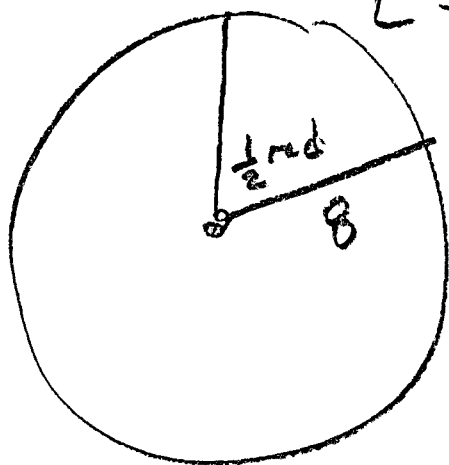


$$C = 2\pi(5)$$

$$C = 10\pi$$

$$\left(\frac{35}{360}\right) 10\pi = \frac{35\pi}{36}$$

(Ex)



$$L = r(\overset{\downarrow}{s})_{\text{angle}}$$

$$C = 2\pi r$$

$$L = 8\left(\frac{1}{2}\right) = 4$$

$$\left(\frac{\frac{1}{2} \text{ rad}}{2\pi}\right) \frac{2\pi r}{1} = \frac{1}{2} \text{ rad} (8) = 4$$