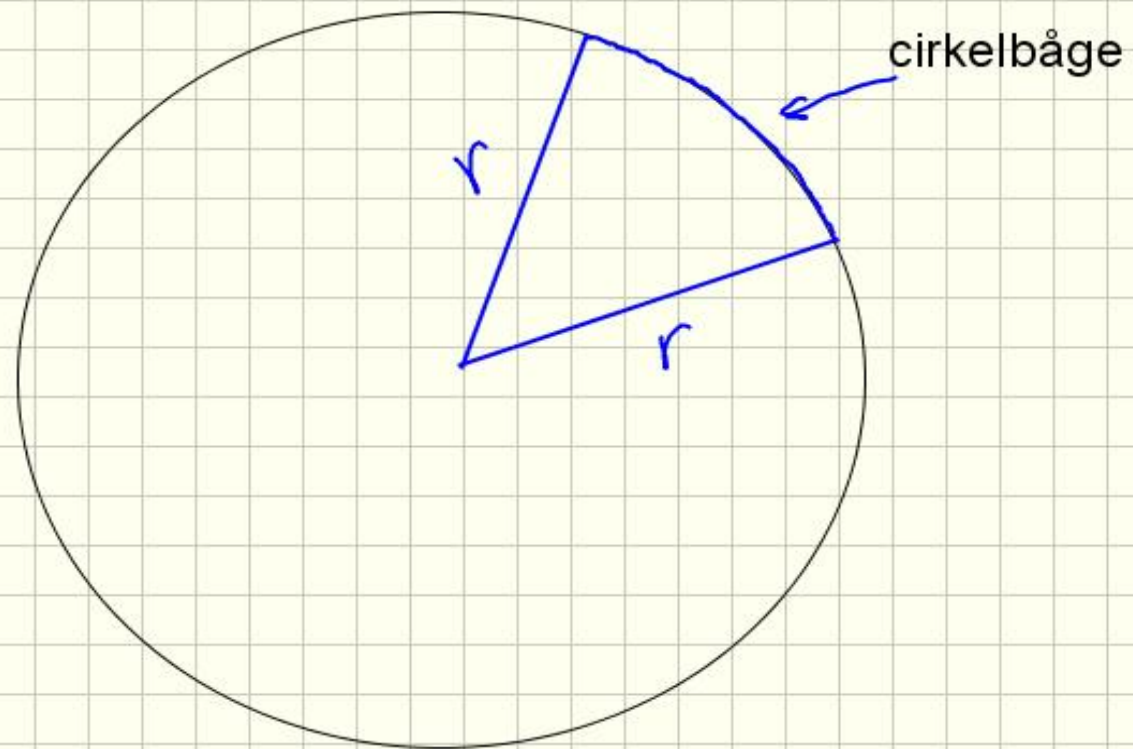
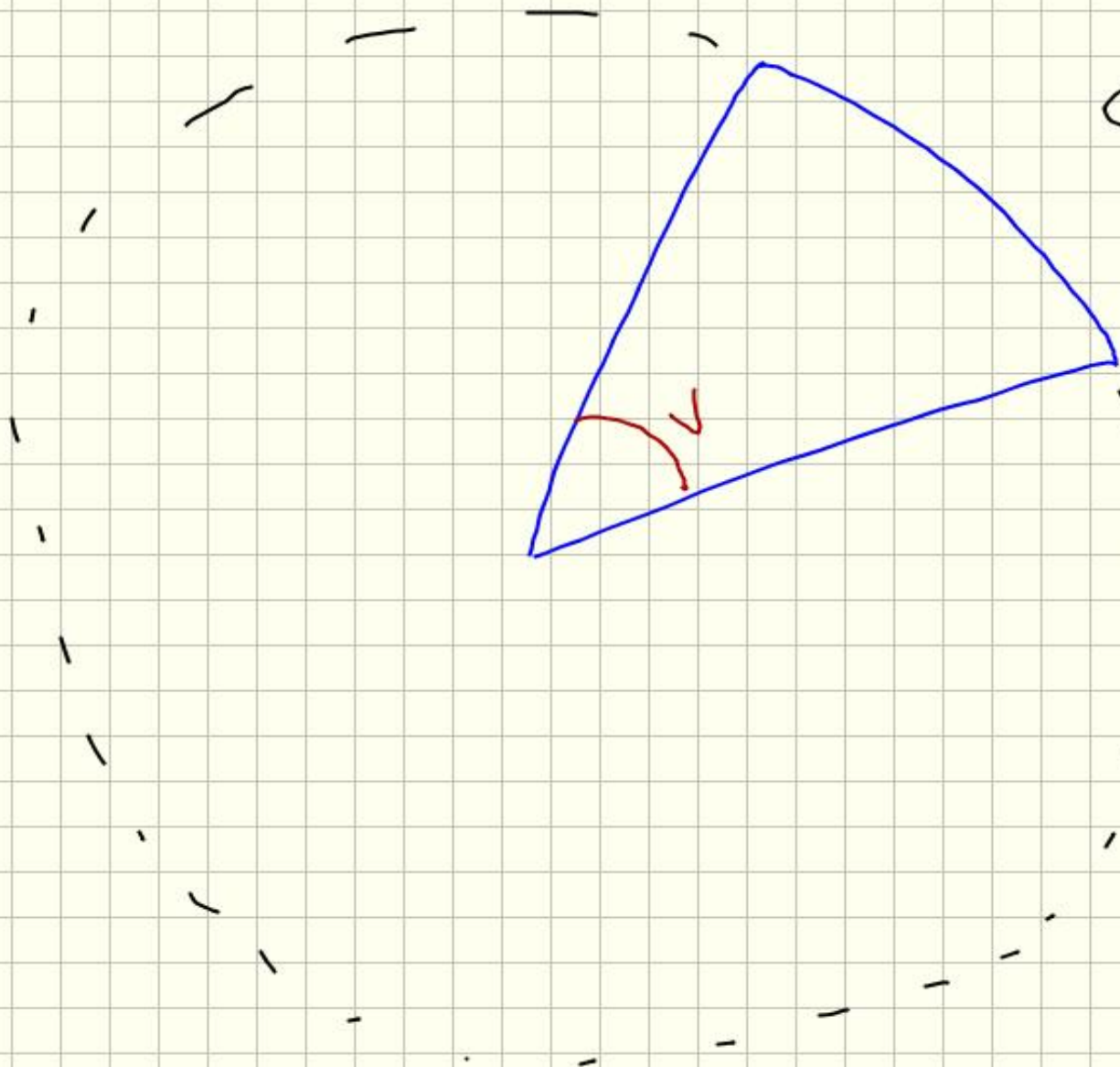


# Cirkelsektor

Del av en cirkel som begränsas av två radier och en en cirkelbåge.



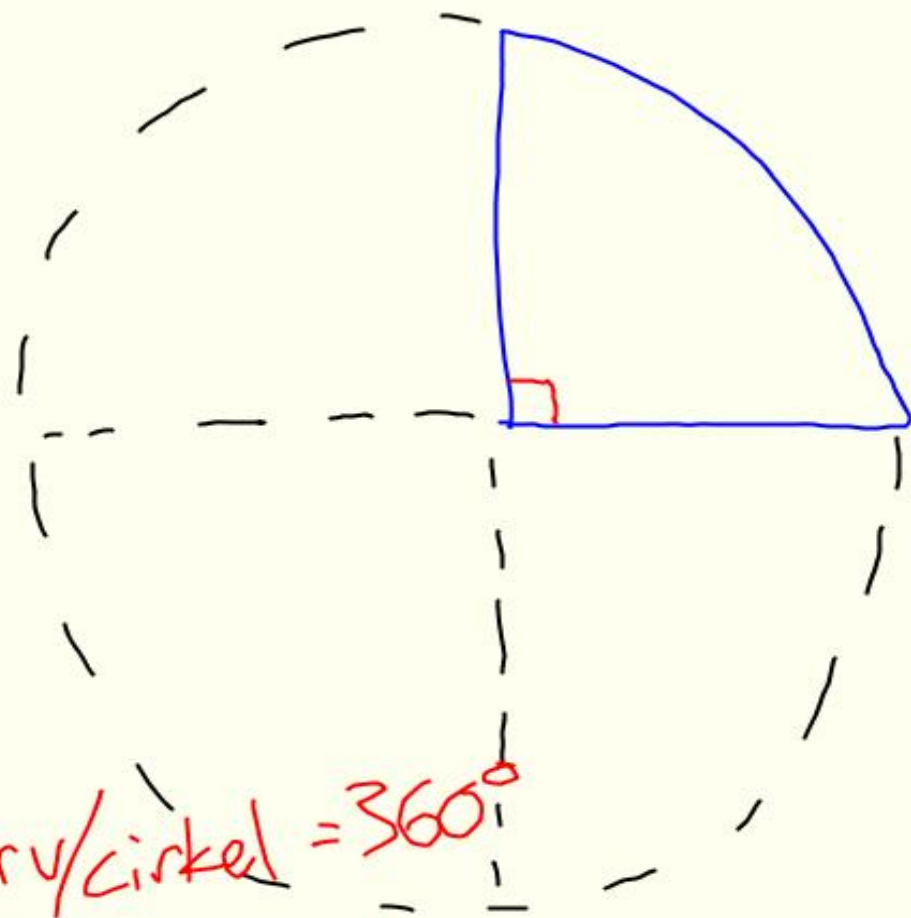


OBS!

Cirkelsektorn är  
en del av en  
hel cirkel.

Vi behöver  
veta hur  
stor del.

Vi behöver  
vinkeln.



Helt varv/cirkel =  $360^\circ$

En fjärdedel =  $90^\circ$

$$\frac{1}{4} = 25\% = 0,25$$

$$A_{\text{tot}} = 400 \text{ cm}^2$$

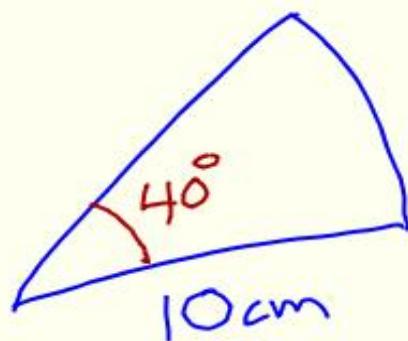
$$A_{\text{CS}} = 400 \cdot 0,25$$

$$A_{\text{CS}} = 100 \text{ cm}^2$$

$$\text{Andel CS} \Rightarrow \frac{90}{360} = 0,25$$

När vi vet andelen för CS så multiplicerar vi med  $A_{TOT}$ .

Ex:



$$1. A_{TOT} = r \cdot r \cdot \pi$$

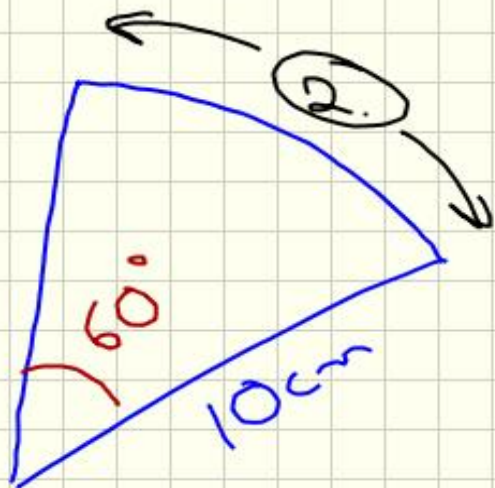
$$A_{TOT} = 10 \cdot 10 \cdot 3,14 = 314 \text{ cm}^2$$

$$2. \text{Andel} \Rightarrow \frac{40}{360} = \frac{4}{36} = \frac{1}{9} = \underline{\underline{0,11}}$$

$$3. A_{CS} = 314 \cdot 0,11$$

$$\underline{\underline{A_{CS} = 34,54 \text{ cm}^2}}$$

# Omkrets cirkel sektor.



1. Räkna ut hela omkretsen.
2. Cirkelbåge ( $\frac{\text{delen}}{\text{det hela}}$ )
3. Addera radier.

$$\textcircled{1} \quad O_{\text{TOT}} = d \cdot \pi = 20 \cdot 3,14$$

$$O_{\text{TOT}} = 62,8 \text{ cm}$$

$$\textcircled{2} \quad \frac{60}{360} = \frac{1}{6} \approx 0,167 \approx 17\% \Rightarrow 0,167 \cdot 62,8 \approx \underline{\underline{10,5 \text{ cm}}}$$

$$\textcircled{3} \quad 10,5 + 10 + 10$$

$$O_{\text{CS}} = \underline{\underline{30,5 \text{ cm}}}$$

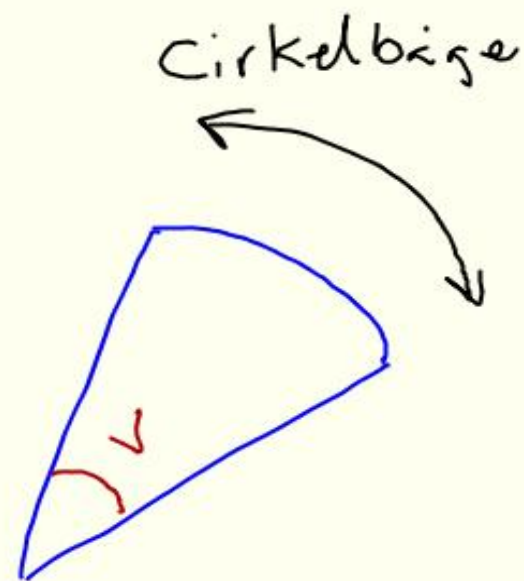
## Generella formler:

$$A_{\text{Cirkelsektor}} = \frac{\nu}{360} \cdot r^2 \cdot \pi$$

(andel ·  $A_c$ )

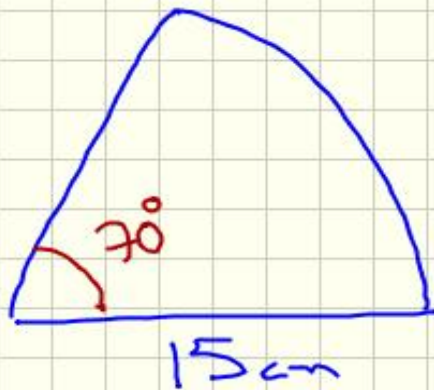
$$\text{Cirkelbåge} = \frac{\nu}{360} \cdot d \cdot \pi$$

$$O_{\text{cirkelsektor}} = \frac{\nu}{360} \cdot d \cdot \pi + 2r$$



# Pröva själva:

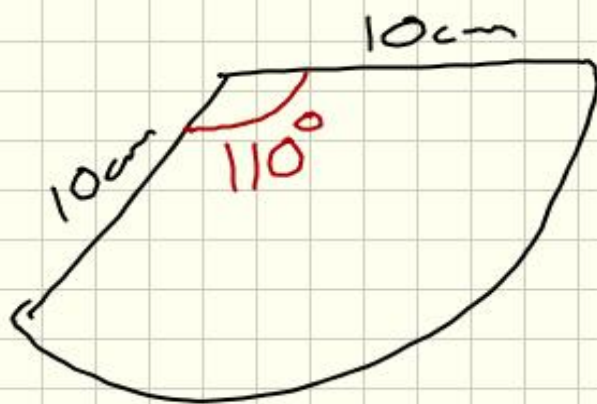
1



$$A \approx 137$$

$$O \approx 47,9$$

2.



$$A = 95,94 \approx 96 \text{ cm}^2$$

$$O \approx 38 \text{ cm}$$

3.



$$A \approx 104 \text{ cm}^2$$

$$O \approx 50 \text{ cm}$$