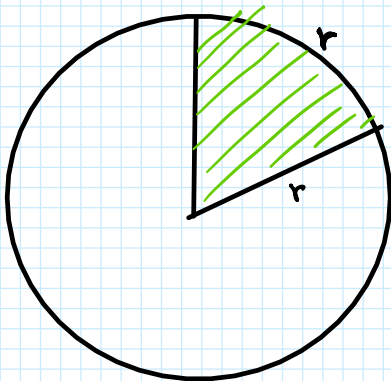


RADIANTI

UN MODO ALTERNATIVO PER ESPRIMERE GLI ANGOLI

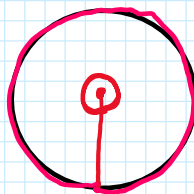


RADIANTE

È un angolo al centro che sottende un arco di lunghezza uguale al raggio

[rad] → NON SI USA SCRIVERLO!

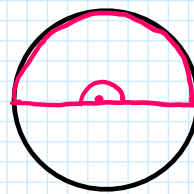
ANGOLO GIRO



$$C = 2\pi r$$

$$360^\circ \rightarrow 2\pi \text{ [rad]}$$

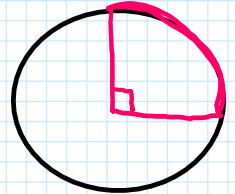
ANGOLO PIATTO



$$\frac{C}{2} = \pi r$$

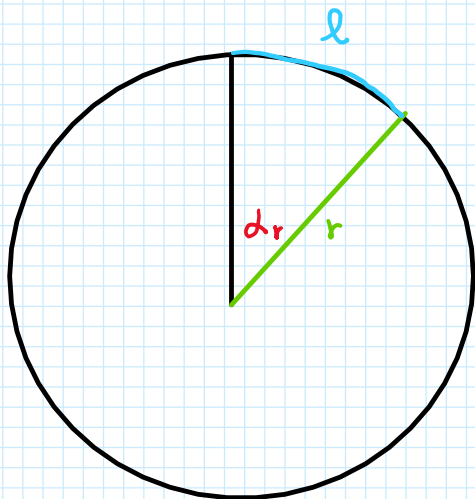
$$180^\circ \rightarrow \pi \text{ [rad]}$$

ANGOLO RETTO



$$\frac{C}{4} = \frac{\pi}{2} r$$

$$90^\circ \rightarrow \frac{\pi}{2} \text{ [rad]}$$



l = LUNGHEZZA DELL'ARCO

r = LUNGHEZZA DEL RAGGIO

α_r = ANGOLO IN RADIANTI

$$\alpha_r = \frac{l}{r}$$

LUNGHEZZA ARCO : α° = CIRCONFERENZA : 360°

$$l : \alpha^\circ = C : 360^\circ$$

$$l : \alpha^\circ = 2\pi r : 360^\circ$$

$$\alpha_r = \frac{l}{r} = \alpha^\circ \frac{2\pi}{360^\circ}$$

$$\alpha_r = \frac{\alpha^\circ \pi}{180^\circ}$$

$$\alpha^\circ = \frac{\alpha_r \cdot 180^\circ}{\pi}$$

DAI GRADI AI RADIANTI

$$\alpha r = \frac{\alpha^\circ}{180^\circ} \pi$$

$$1) \quad 15^\circ = \frac{15^\circ}{180^\circ} \pi = \frac{\pi}{12}$$

$$4) \quad 102^\circ = \frac{102^\circ}{180^\circ} \pi = \frac{17}{30} \pi \approx 1,78$$

$$2) \quad 36^\circ = \frac{36^\circ}{180^\circ} \pi = \frac{\pi}{5}$$

$$5) \quad 315^\circ = \frac{315^\circ}{180^\circ} \pi = \frac{7}{4} \pi \approx 5,50$$

$$3) \quad 210^\circ = \frac{210^\circ}{180^\circ} \pi = \frac{7}{6} \pi$$

$$6) \quad \frac{4}{5} \pi = \frac{4\pi}{5} \cdot \frac{1}{\pi} \cdot 180^\circ = 36^\circ \cdot 4 = 144^\circ$$

$$\alpha^\circ = \frac{\alpha_{rad}}{\pi} \cdot 180^\circ$$

$$7) \quad \frac{7}{9} \pi = \frac{7\pi}{9} \cdot \frac{1}{\pi} \cdot 180^\circ = 140^\circ$$

$$8) \quad \frac{2}{3} \pi = \frac{2\pi}{3} \cdot \frac{1}{\pi} \cdot 180^\circ = 120^\circ$$

$$9) \quad \frac{2}{3} = \frac{2}{3} \cdot \frac{1}{\pi} \cdot 180^\circ = 38,1971^\circ = 38^\circ 11' 50''$$

$$\begin{array}{r} 38,1971 \\ - 38 \\ \hline 0,1971 \times 60 = \\ 11,8311 \\ - 11 \\ \hline 0,8311 \times 60 = \\ 50 \end{array}$$

$$10) \quad 4\pi = 4\pi \cdot \frac{1}{\pi} \cdot 180^\circ = 720^\circ$$

$$11) \quad 4 = 4 \cdot \frac{1}{\pi} \cdot 180^\circ = 229,1831 = 229^\circ 11'$$

$$12) \quad 3,405 = 3,405 \cdot \frac{1}{\pi} \cdot 180^\circ = 195,1910^\circ = 195^\circ 11' 28''$$

$$\begin{array}{r} 195,1910 \\ - 195 \\ \hline 0,1910 \times 60 = \\ 11,46 - \\ 11 \\ \hline 0,46 \times 60 = \\ 28 \end{array}$$