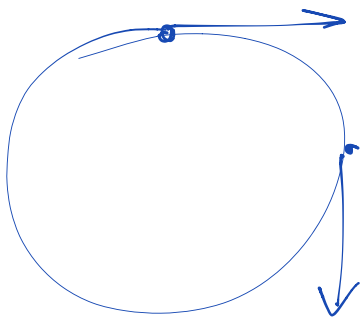
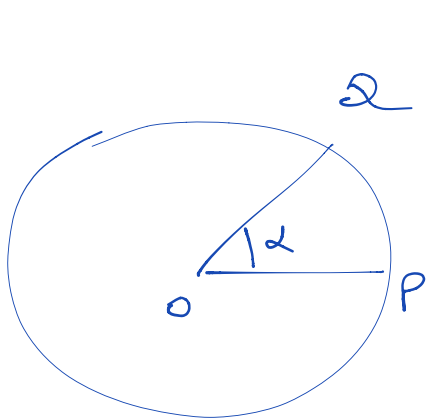


## Velocità tangenziale

$$v = \frac{\Delta s}{\Delta t} = \frac{2\pi R}{T}$$



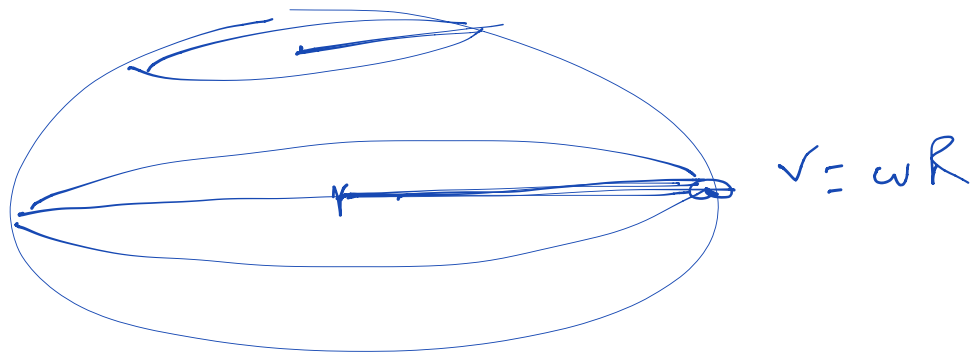
## Velocità angolare



$$\omega = \frac{\Delta \alpha}{\Delta t}$$

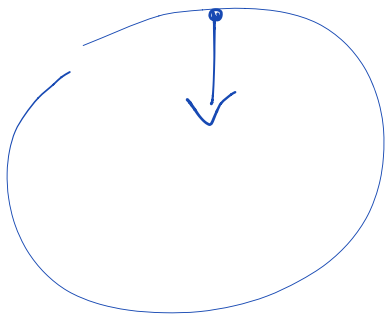
$$\omega = \frac{2\pi}{T} \quad \frac{\text{rad}}{\text{s}}$$

$$v = \frac{2\pi R}{T} = \omega R$$



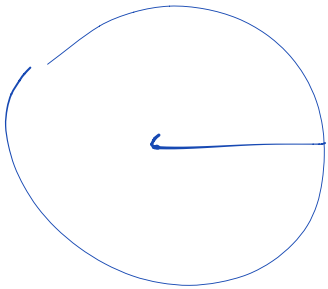
Accel. centripeta

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$$a_c = \frac{v^2}{R}$$

E1 scheda RWU



$$R = 2,5 \text{ m}$$

$$\Delta l = 4 \text{ m}$$

$$\Delta t = 5 \text{ s}$$

$$4 \text{ m} : 5 \text{ s} = \boxed{2\pi R : x} \quad \checkmark$$

$$4 \text{ m} : 5 \text{ s} = 15,7 \text{ m} : T$$

$$T = \frac{15,7 \times 5}{4} = 19,6 \text{ s}$$

$$v = \frac{2\pi R}{T} = 0,8 \text{ m/s}$$

$$\omega = \frac{2\pi}{T}$$

$$2\pi : 19,6 = x : 15$$

$$x = 12 \text{ m}$$

$$\underline{1.5} \quad R = 150\,000\,000\,000 \text{ km} = \\ = 1,5 \cdot 10^{11} \text{ m}$$

$$T = 3,2 \cdot 10^7 \text{ s}$$

$$v = \frac{2\pi R}{T} = \frac{6,28 \cdot 1,5 \cdot 10^{11}}{3,2 \cdot 10^7} =$$

$$= 2,9 \cdot 10^4 \text{ m/s} =$$

$$= 29 \cdot 10^3 \text{ m/s} = 29 \frac{\text{km}}{\text{s}}$$

$$a_c = \frac{v^2}{R} = \frac{29^2 \cdot 10^6}{1,5 \cdot 10^{11}} = 5,8 \cdot 10^{-3} \frac{\text{m}}{\text{s}^2}$$

n.19  $R = 25 \text{ m}$      $\Delta t = 0,4 \text{ s}$      $\alpha = 30^\circ$   
 $\Delta \varrho = 5 \text{ m}$      $\Delta t = 4 \text{ s}$

$$\omega = \frac{\Delta \alpha}{\Delta t} = \frac{\frac{\pi}{6}}{0,4} = 1,3 \text{ rad/s}$$

$$v = \omega R = 1,3 \cdot 25 = 33 \text{ m/s}$$

$$\underline{n.15} \quad f = 10 \text{ Hz}$$

$$v = 2\pi R f$$

$$\omega = 2\pi f$$

$$T = \frac{1}{f} = \frac{1}{10} = 0,1 \text{ s}$$

$$\omega = 2\pi \cdot 10 = 6,28 \cdot 10 = 62,8 \frac{\text{rad}}{\text{s}}$$

$$\Delta t = \frac{1}{100} \text{ s} = 0,01 \text{ s} \quad \alpha = 36^\circ$$