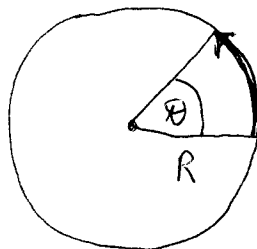


3.)



$$s = bt^2 + ct$$

$$b = 0,5 \text{ m/s}^2$$

$$c = 2 \text{ m/s}$$

$$a(t_2) = 2a(t_1)$$

$$t_2 = 5 \text{ s} \quad t_1 = 2 \text{ s}$$

 $R = ?$

$$a = \sqrt{a_t^2 + a_n^2}$$

$$a_n = \frac{v^2}{R} = \omega^2 R$$

$$v = a_t \cdot t + v_0$$

$$s = \frac{a_t}{2} t^2 + v_0 t$$

$$\omega \cdot R = v$$

$$\beta \cdot R = a_t$$

$$\theta \cdot R = s$$

$$s = \underbrace{\frac{a_t}{2}}_{0,5 \text{ m/s}^2} t^2 + \underbrace{v_0}_{2 \text{ m/s}} t$$

$$\Leftrightarrow s = 0,5 \frac{\text{m}}{\text{s}^2} t^2 + 2 \frac{\text{m}}{\text{s}} t$$


 $a_t, v_0 \checkmark$

$$a = \sqrt{a_t^2 + a_n^2} = \sqrt{a_t^2 + \left(\frac{v^2}{R}\right)^2} = \sqrt{a_t^2 + \left[\frac{(v_0 + a_t \cdot t)^2}{R}\right]^2}$$

$$a = \sqrt{1 + \frac{(2+t)^4}{R^2}}$$



$$a(t=5\text{s}) = 2a(t=2\text{s})$$


 $\underline{\underline{R}}$