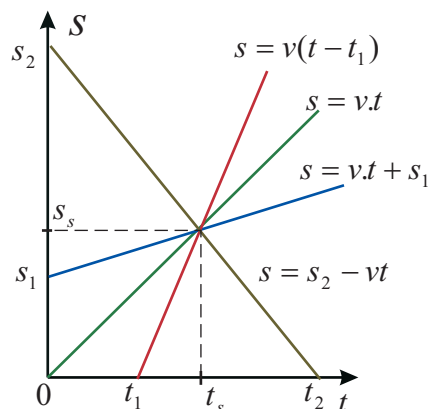


Enakomerno gibanje

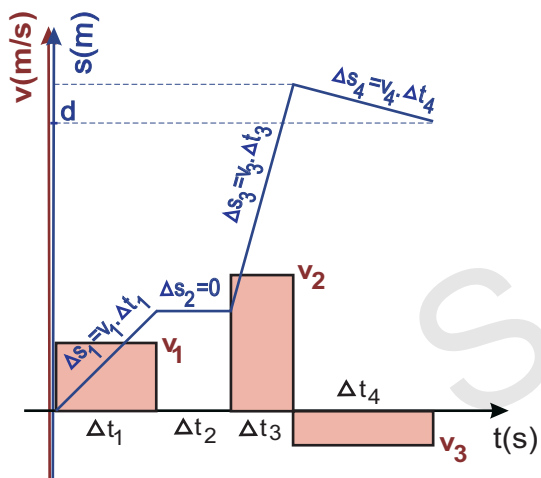
Grafi poti od časa



Narišemo primeru ustrezen graf linearne funkcije poti s v odvisnosti od časa t .

Če želimo npr. izračunati čas t_s in pot s_s srečanja, izenačimo ustrezni enačbi.

Odsekoma enakomerno gibanje

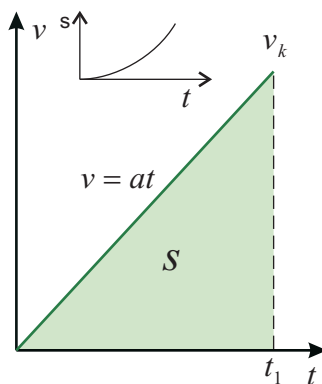


skupna razdalja: $d = \Delta s_1 + \Delta s_2 + \Delta s_3 - \Delta s_4$

povprečna hitrost: $\bar{v} = \frac{d}{t_s}$

skupni čas: $t_s = \Delta t_1 + \Delta t_2 + \Delta t_3 + \Delta t_4$

Enakomerno pospešeno gibanje



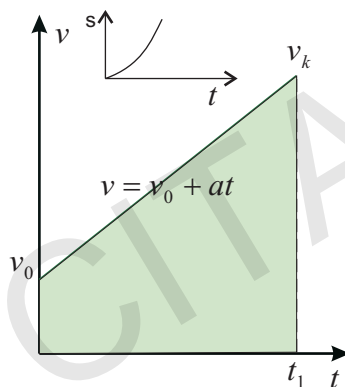
$$v_k = at_1$$

$$s = \frac{t_1 \cdot v_k}{2} = \frac{a \cdot t_1^2}{2}$$

s = ploščina pod grafom $v(t)$

$$t_1 = \sqrt{\frac{2s}{a}}$$

$$v_k = a \sqrt{\frac{2s}{a}} = \sqrt{2sa}$$

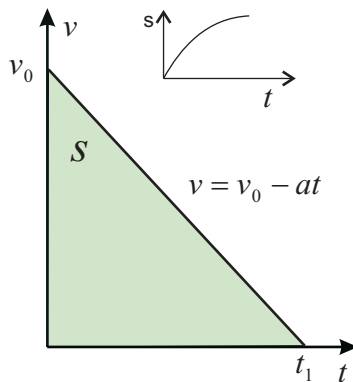


$$v_k = v_0 + at_1$$

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

s = ploščina pod grafom $v(t)$

$$v = +\sqrt{v_0^2 + 2as}$$



$$s = v_0 t - \frac{at^2}{2}$$

s = ploščina pod grafom $v(t)$

$$t_1 = \frac{v_0}{a}$$

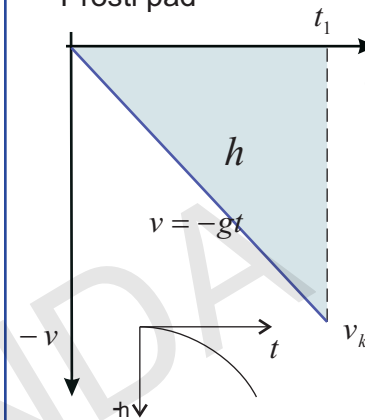
$$s_{\max} = \frac{v_0 t_1}{2} = \frac{v_0^2}{2a}$$

$$v_0 = \sqrt{2as_{\max}}$$

$$v^2 = v_0^2 - 2as$$

Navpični met – prosti pad

Prosti pad



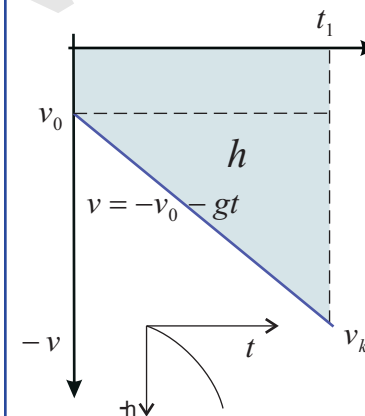
$$v_k = -gt_1$$

$$h = -\frac{v_k t_1}{2} = -\frac{gt_1^2}{2}$$

h = ploščina pod grafom $v(t)$

$$t_1 = \sqrt{\frac{2h}{g}}$$

$$v_k = -g \sqrt{\frac{2h}{g}} = -\sqrt{2hg}$$



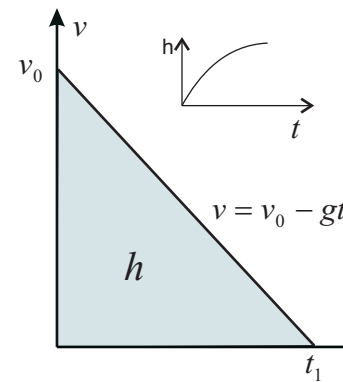
$$v_k = -v_0 - gt_1$$

$$h = -v_0 t - \frac{gt^2}{2}$$

h = ploščina pod grafom $v(t)$

$$v = -\sqrt{v_0^2 + 2gh}$$

Navpični met



$$h = v_0 t - \frac{gt^2}{2}$$

s = ploščina pod grafom $v(t)$

$$t_1 = \frac{v_0}{g}$$

$$h_{\max} = \frac{t_1 v_0}{2} = \frac{v_0^2}{2g}$$

$$v_0 = \sqrt{2gh_{\max}}$$

$$v^2 = v_0^2 - 2gh$$