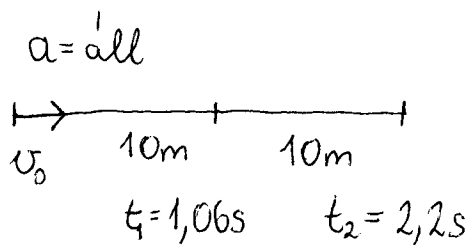


5.)



$$a = ? \quad v_0 = ?$$

$$x = \frac{a}{2}t^2 + v_0 t + x_0$$

(i)

$$10 = v_0(1,06) + \frac{a}{2}(1,06)^2 = 1,06v_0 + 0,5618a$$

$$20 = v_0(3,26) + \frac{a}{2}(3,26)^2 = 3,26v_0 + 5,3138a$$

$$v_0 = \frac{10 - 0,5618a}{1,06} = 9,434 - 0,53a$$

$$20 = 3,26(9,434 - 0,53a) + 5,3138a$$

$$-10,7548 = 3,586a$$

$$\underline{a = -3 \text{ m/s}^2}$$

(ii)

$$v_0 = 9,434 - 0,53(-3) = \underline{11,024 \text{ m/s}}$$