

# RIASSUNTO

MOTO RETTILINEO  
UNIFORME

$$a = 0$$

$$v = \text{COSTANTE}$$

$$s = s_0 + vt$$

MOTO RETTILINEO  
UNIFORMEMENTE  
ACCELERATO

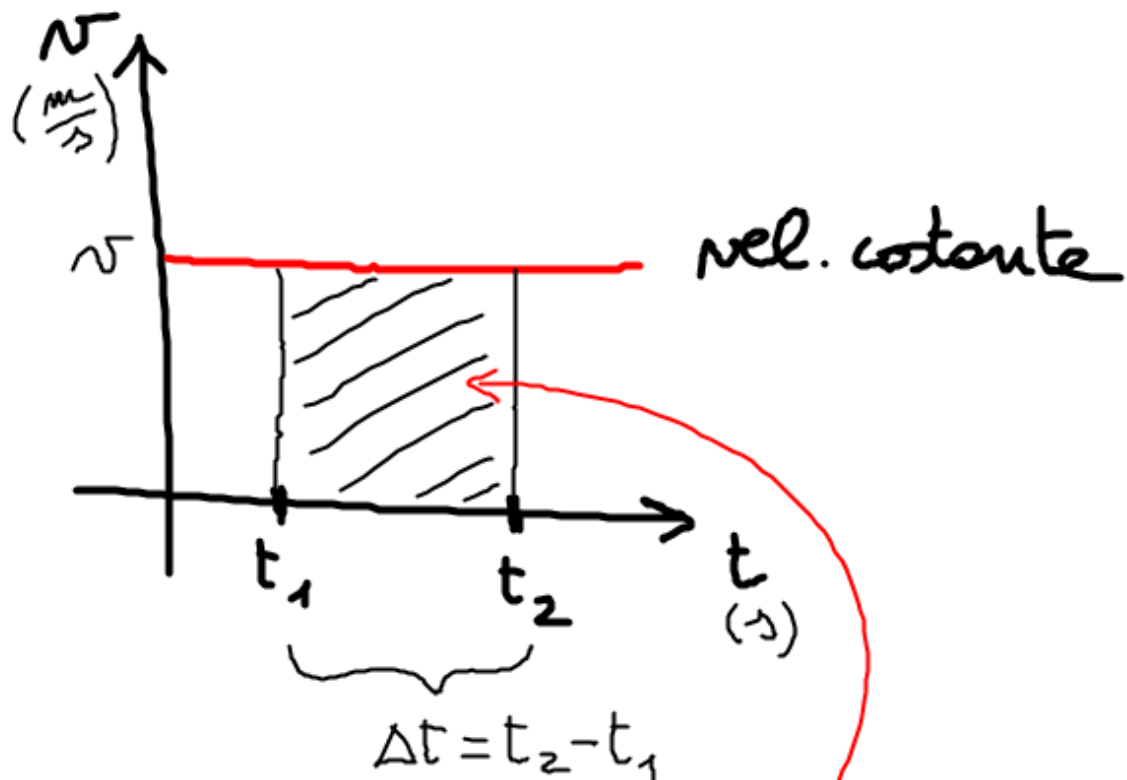
$$a = \text{COSTANTE}$$

$$v = v_0 + at$$

$$s = \frac{1}{2}at^2 + v_0t + s_0$$

# MOTO RETT. UNIFORME

GRAFICO VELOCITÀ TEMPO



AREA = SPOSTAMENTO  $\Delta s$

$$s = s_0 + vt$$

POSIZIONE

ALL'IST.  $t_1$

$$s_1 = s_0 + vt_1$$

POSIZ.

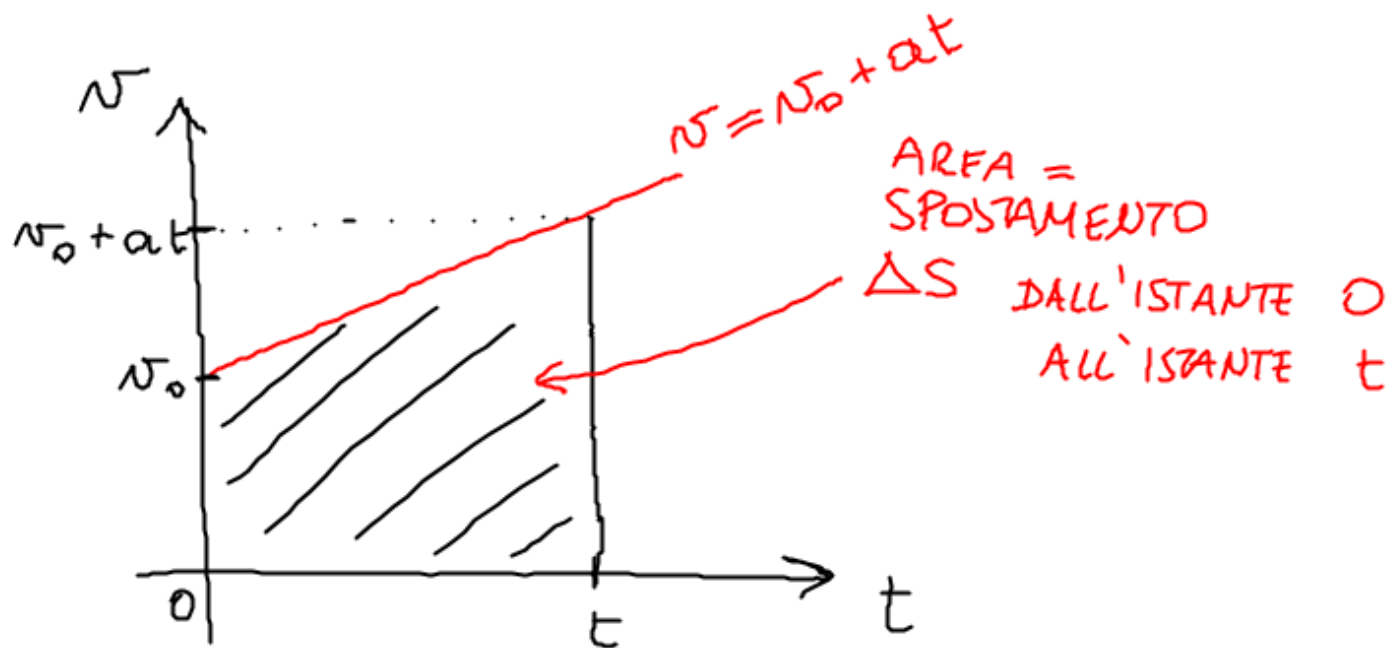
ALL'IST.  $t_2$

$$s_2 = s_0 + vt_2$$

SPOSTAMENTO

$$\begin{aligned} \Delta s &= s_2 - s_1 = \\ &= vt_2 - vt_1 = \\ &= v(t_2 - t_1) \end{aligned}$$

# MOTO UNIFORMEMENTE ACCELERATO



AREA  $\Delta S = \frac{[(v_0 + at) + v_0]t}{2} =$

$$= \frac{[2v_0 + at]t}{2} = \frac{at^2 + 2v_0t}{2} = \frac{1}{2}at^2 + v_0t$$

$S - S_0 = \frac{1}{2}at^2 + v_0t$

$$S = \frac{1}{2}at^2 + v_0t + S_0$$

U 63 pag. 249

$$v_0 = 0$$

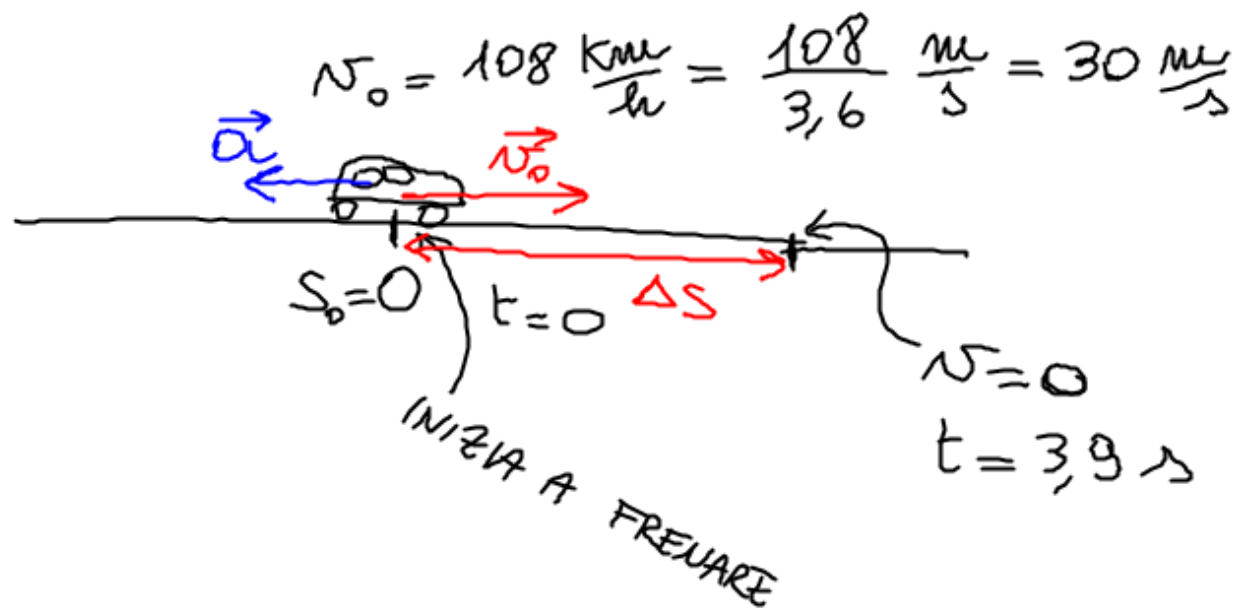
$$v = 3,6 \frac{\text{m}}{\text{s}} \quad t = 5,0 \text{ s}$$

$$v = at \Rightarrow a = \frac{v}{t} = \frac{3,6 \frac{\text{m}}{\text{s}}}{5,0 \text{ s}} = 0,72 \frac{\text{m}}{\text{s}^2}$$

$$\Delta s = s - \underbrace{s_0}_{=0} = s = \frac{1}{2} at^2 =$$

$$= \frac{1}{2} \left( 0,72 \frac{\text{m}}{\text{s}^2} \right) (5,0 \text{ s})^2 = \boxed{9,0 \text{ m}}$$

N. 76 pag. 250



$$v = at + v_0$$

$$0 = a(3,9 \text{ s}) + 30 \frac{\text{m}}{\text{s}}$$

$$0 = 3,9 \cdot a + 30$$

$$a = -\frac{30}{3,9} \frac{\text{m}}{\text{s}^2} = -7,692 \dots \frac{\text{m}}{\text{s}^2} \approx -7,7 \frac{\text{m}}{\text{s}^2}$$

$$\Delta s = \frac{1}{2} at^2 + v_0 t =$$

$$= \frac{1}{2} \left( -7,7 \frac{\text{m}}{\text{s}^2} \right) (3,9 \text{ s})^2 + \left( 30 \frac{\text{m}}{\text{s}} \right) (3,9 \text{ s})$$

$$= 58,44 \text{ m}$$

$$\approx \boxed{58 \text{ m}}$$