

$$3) \Delta S = 100 \text{ m} \quad \Delta t_1 = 1 \text{ min } 10 \text{ s} \quad \Delta S_1 = 76 \text{ m}$$

$$\Delta t_2 = 26 \text{ s} \quad \Delta S_2 = 24 \text{ m}$$

$$\Delta t_{\text{TOT}} = 1 \text{ min } 36 \text{ s} = 96 \text{ s}$$

$v_m = ?$

$$v_m = \frac{\Delta S}{\Delta t_{\text{TOT}}} = \frac{100 \text{ m}}{96 \text{ s}} = 1,04 \text{ m/s}$$

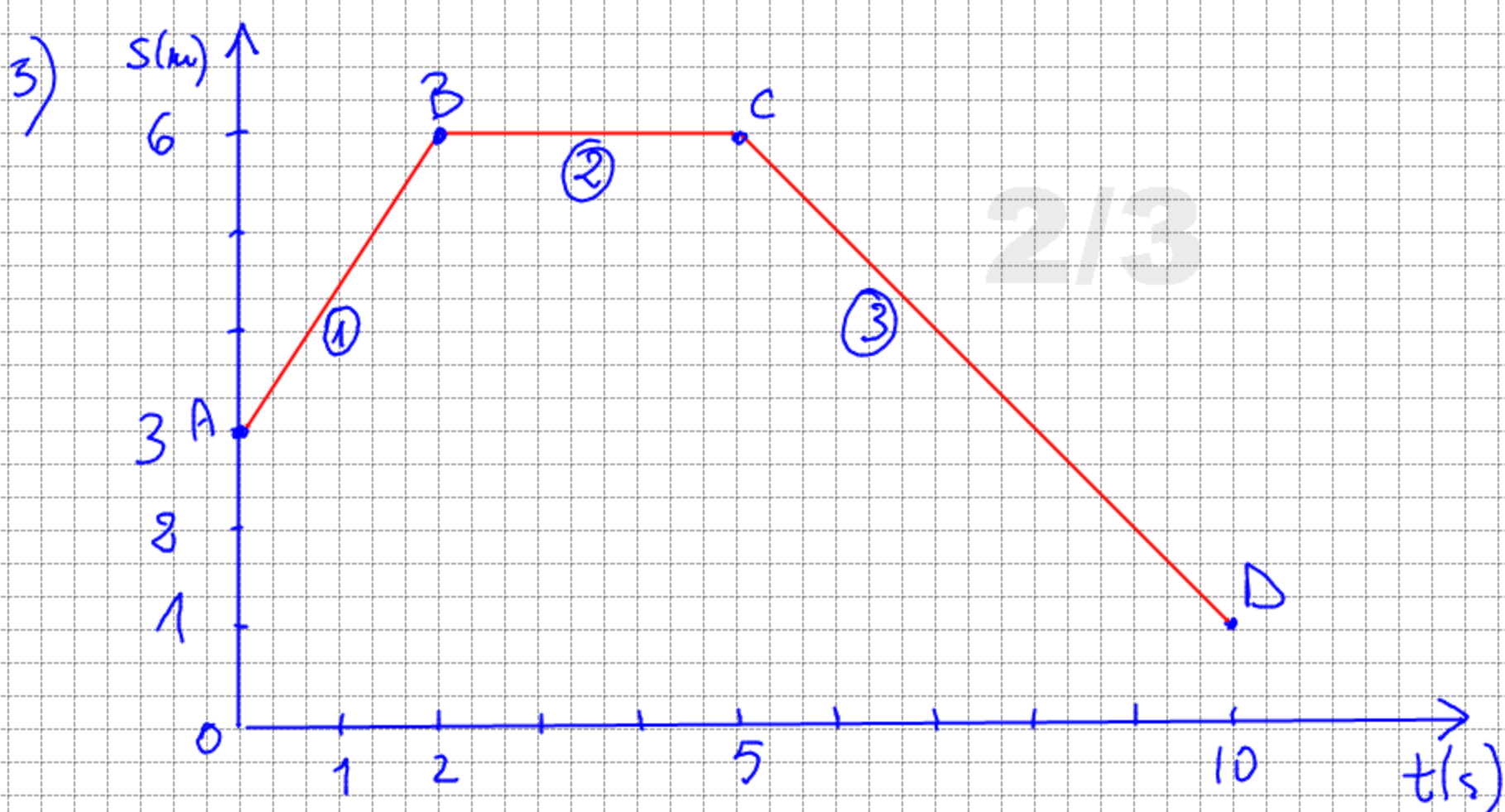
4) ① 27 Km 15 Km/h $v_m = ?$
② 13 Km 25 Km/h

$$v_1 = \frac{\Delta S_1}{\Delta t_1} \quad \Delta t_1 = \frac{\Delta S_1}{v_1} = \frac{27 \text{ Km}}{15 \text{ Km/h}} = 1,8 \text{ h} = 1 \text{ h } 48 \text{ min}$$

$$v_2 = \frac{\Delta S_2}{\Delta t_2} \quad \Delta t_2 = \frac{\Delta S_2}{v_2} = \frac{13 \text{ Km}}{25 \text{ Km/h}} = 0,5 \text{ h} = 30 \text{ min}$$

$$\Delta t_{\text{TOT}} = 2,3 \text{ h} = 2 \text{ h } 18 \text{ min}$$

$$v_m = \frac{\Delta S_{\text{TOT}}}{\Delta t_{\text{TOT}}} = \frac{40 \text{ Km}}{2,3 \text{ h}} = 17,2 \frac{\text{ Km}}{\text{ h}}$$



AB: $t_i = 0\text{ s}$ $S_i = 3\text{ m}$
 $t_f = 2\text{ s}$ $S_f = 6\text{ m}$

$$v_{AB} = \frac{\Delta S}{\Delta t} \Rightarrow v_{AB} = \frac{S_f - S_i}{t_f - t_i}$$

$$v_{AB} = \frac{3\text{ m}}{2\text{ s}} = 1,5 \frac{\text{m}}{\text{s}}$$

$$S = vt + S_0 \Rightarrow \boxed{S = \left(1,5 \frac{\text{m}}{\text{s}}\right)t + 3\text{ m}}$$

BC: $t_i = 2\text{ s}$ $S_i = 6\text{ m}$
 $t_f = 5\text{ s}$ $S_f = 6\text{ m}$

$$v_{BC} = \frac{\Delta S}{\Delta t} \quad v_{BC} = \frac{S_f - S_i}{t_f - t_i}$$

$$v_{BC} = \frac{6\text{ m} - 6\text{ m}}{5\text{ s} - 2\text{ s}} \quad v_{BC} = 0 \frac{\text{m}}{\text{s}}$$

$$S = vt + S_0 \Rightarrow \boxed{S = 6\text{ m}}$$

CD: $t_i = 5\text{ s}$ $S_i = 6\text{ m}$
 $t_f = 10\text{ s}$ $S_f = 1\text{ m}$

$$v_{CD} = \frac{\Delta S}{\Delta t} \quad v_{CD} = \frac{S_f - S_i}{t_f - t_i}$$

$$v_{CD} = \frac{1\text{ m} - 6\text{ m}}{10\text{ s} - 5\text{ s}} \quad v_{CD} = \frac{-5\text{ m}}{5\text{ s}}$$

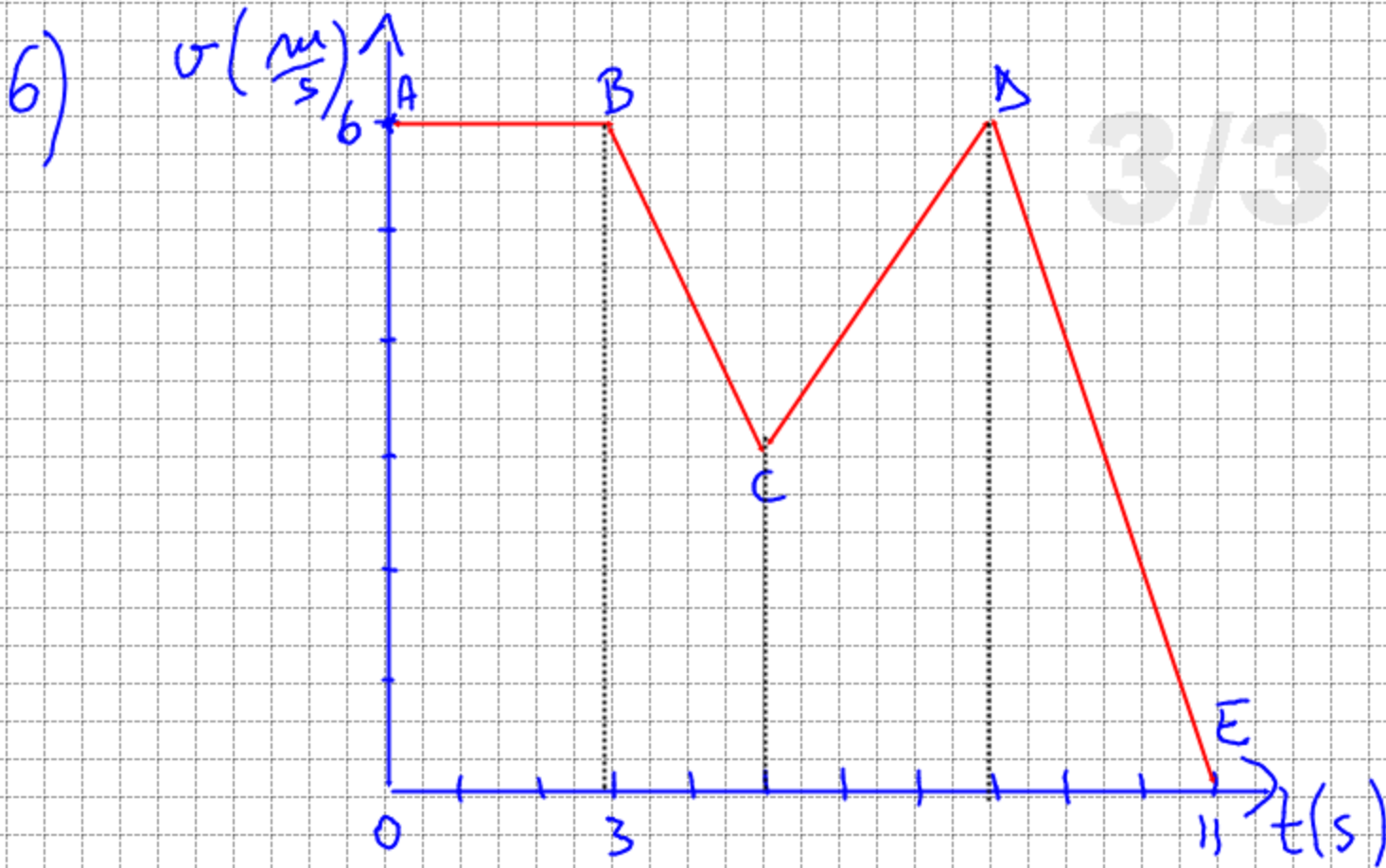
$$v_{CD} = -1 \frac{\text{m}}{\text{s}}$$

$$S = vt + S_0 \quad S = \left(-1 \frac{\text{m}}{\text{s}}\right)t + S_0 \quad \text{impongo il passaggio per C (oppure D)}$$

$$\left(\begin{array}{l} \text{D: } 1\text{ m} = \left(-1 \frac{\text{m}}{\text{s}}\right)(10\text{ s}) + S_0 \\ S_0 = (1 + 10)\text{ m} = 11\text{ m} \end{array} \right)$$

$$\text{C: } 6\text{ m} = \left(-1 \frac{\text{m}}{\text{s}}\right)(5\text{ s}) + S_0 \\ S_0 = 11\text{ m}$$

$$\boxed{S = -1t + 11}$$



AB: $t_i = 0s$ $v_i = 6m/s$
 $t_f = 3s$ $v_f = 6m/s$

$$\Delta v = v_f - v_i = 0 \frac{m}{s} \Rightarrow$$

$a = 0 \Rightarrow$ moto rettilinea
uniforme

$$v = \frac{\Delta s}{\Delta t} \Rightarrow s - s_i = vt$$

$$s = vt + s_i \quad s = (6m/s)t$$