

- ①. Correctes : b et d
Incorrectes : a / c / e

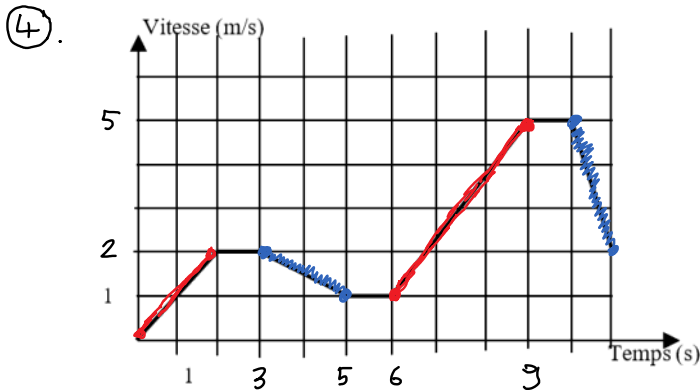
②. $a = \frac{v_f - v_i}{t} = \frac{37,5 - 0}{75} = 0,5 \text{ m/s}^2$

- ③. "arrêt" signifie 0 m/s
 $v_f = 10 \text{ m/s}$
 $t = 40 \text{ s}$

(a). $v_i = 0 \text{ m/s}$

(b). $v_f = 10 \text{ m/s}$

(c). $a = \frac{v_f - v_i}{t} = \frac{10 - 0}{40} = 0,25 \text{ m/s}^2$



(a). En rouge sur le dessin

• t entre 0s et 2s

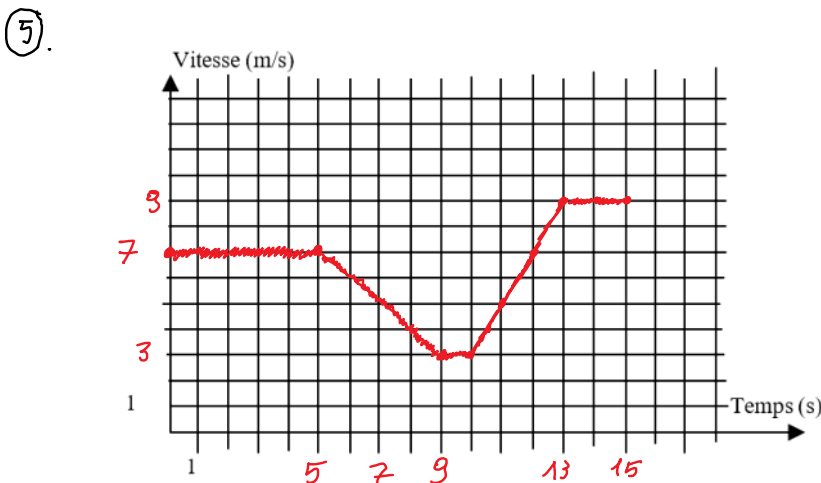
• t entre 6s et 9s

(b). En bleu sur le dessin

• t entre 3s et 5s

• t entre 11s et 12s

(c). $a = \frac{v_f - v_i}{t} = \frac{5 - 1}{3} = 1,3 \text{ m/s}^2$



(a). 3 m/s

(b). $a = \frac{v_f - v_i}{t} = \frac{3 - 7}{4} = -1 \text{ m/s}^2$

(c). 9 m/s

⑥. $v_i = 120 \text{ km/h} \xrightarrow{\div 3,6} 33,3 \text{ m/s}$ $t = 30 \text{ s}$
 $v_f = 0 \text{ m/s}$

$a = \frac{v_f - v_i}{t} = \frac{0 - 33,3}{30} = -1,1 \text{ m/s}^2$

- ⑦. Le dernier paragraphe donne les informations pertinentes.

$v_f = 621 \text{ km/h} \xrightarrow{\div 3,6} 172,5 \text{ m/s}$ $v_i = 0 \text{ m/s}$ $t = 3,58 \text{ s}$

$a = \frac{v_f - v_i}{t} = \frac{172,5}{3,58} = 48,2 \text{ m/s}^2$ presque $5 \cdot g$!

⑧. MRUA ! $a = \frac{v_f - v_i}{t} = \frac{0 - 30}{\dots} = -1,88 \text{ m/s}^2$

⑧. MRUA! $a = \frac{v_f - v_i}{t} = \frac{0 - 30}{16} = -1,88 \text{ m/s}^2$

⑨. $v_i = ?$ $v_f = 36 \frac{\text{km}}{\text{h}} \xrightarrow{\div 3,6} 10 \text{ m/s}$
 $a = 0,5 \text{ m/s}^2$ $t = 12 \text{ s}$

$$a = \frac{v_f - v_i}{t}$$

$$0,5 = \frac{10 - v_i}{12} \quad | \cdot 12$$

$$6 = 10 - v_i \quad | -10$$

$$-4 = -v_i \Rightarrow v_i = 4 \text{ m/s}$$

⑩. $t = 7 \text{ s}$ $v_{\text{moy}} = 72 \text{ km/h}$ $\Rightarrow v_f = ?$ $v_i = 90 \text{ km/h}$

$$v_{\text{moy}} = \frac{1}{2}(v_i + v_f)$$

$$72 = \frac{1}{2}(90 + v_f) \quad | \cdot 2$$

$$144 = 90 + v_f \quad | -90$$

$$54 = v_f$$

$$v_f = 54 \text{ km/h}$$

$$d = v_{\text{moy}} \cdot t = 72 \text{ km/h} \cdot \frac{7}{3600} = 140 \text{ m}$$

⑪. D'après le graphique, $v \text{ après } 9 \text{ s} = v_f = 26 \text{ m/s}$

$$\Rightarrow v_{\text{moy}} = \frac{1}{2}(v_i + v_f) = \frac{1}{2} \cdot 26 = 13 \text{ m/s}$$

$$d = v_{\text{moy}} \cdot t = 13 \cdot 9 = 117 \text{ m}$$