

$$x^2 - 6x + 1 = 0 \rightarrow x^2 - 6x + 9 = 1 \rightarrow (x-3)^2 \rightarrow \text{الف) ①}$$

$$x-3 = \pm 1 \rightarrow \begin{cases} x=4 \\ x=2 \end{cases}$$

$$x^2 + 11x + 14 = 0 \rightarrow x^2 + 11x + 14 = 0 \rightarrow (x+2)(x+7) = 0 \rightarrow \text{ب) ②}$$

$$x+2 = \pm \sqrt{9} \rightarrow x+2 = \pm 3 \rightarrow \begin{cases} x = -1 \\ x = -5 \end{cases}$$

$$x^2 - 5x + 4 = 0 \rightarrow (x-1)(x-4) \rightarrow \begin{cases} x=4 \\ x=1 \end{cases} \text{الف) ②}$$

$$x^2 - 8x - 12 = 0 \rightarrow (x+2)(x-10) \rightarrow \begin{cases} x=-2 \\ x=10 \end{cases} \text{ب) ②}$$

$$\frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow x^2 - 3x - 8 = 0 \text{ الف) ③}$$

$$\frac{3 \pm \sqrt{9+32}}{2} = \frac{3 \pm \sqrt{41}}{2} \rightarrow \frac{3 - \sqrt{41}}{2} = \frac{3 - \sqrt{41}}{2} \text{ ۱۲۵}$$

$$\frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow 2x^2 - 8x + \frac{1}{2} = 0 \rightarrow \frac{8 \pm \sqrt{16-2}}{4} \rightarrow x_1 = \frac{8+\sqrt{14}}{4}, x_2 = \frac{8-\sqrt{14}}{4}$$

$$\frac{8 \pm \sqrt{14-2}}{4} = \frac{8}{4} \pm \frac{\sqrt{12}}{4} = 2 \pm \frac{\sqrt{12}}{4} \rightarrow 2 \pm \frac{\sqrt{3}}{2}$$

$$x^2 - 3x + 2 = 0 \rightarrow (x-1)(x-2) \rightarrow \begin{cases} x=1 \\ x=2 \end{cases} \text{الف) ④}$$

$$9x^2 + x - 3 = 0 \rightarrow x^2 + x - 12 = 0 \rightarrow (x+4)(x-3) \rightarrow \text{ب) ②}$$

$$x = -\frac{1}{9} = -1 \rightarrow \begin{cases} x = \frac{1}{9}, 10 \end{cases}$$

$$\omega x^2 - 12x + 4 = 0 \rightarrow x^2 - 12x + 36 = 0 \rightarrow \text{الف) (د)}$$

$$(x-6)(x-6) \rightarrow \begin{cases} x = \frac{6}{1} = 6 \\ x = \frac{6}{1} = 6 \end{cases} \quad \checkmark$$

$$3x^2 - 10x + 4 = 0 \rightarrow x^2 - 10x + 21 = 0 \rightarrow \text{ب) (ب)}$$

$$(x-3)(x-7) \rightarrow \begin{cases} x = \frac{3}{1} = 3 \\ x = \frac{7}{1} = 7 \end{cases} \quad \checkmark$$

$$-3x^2 + 8x - 1 = 0 \rightarrow 28 - \frac{4(-3x-1)}{-12} = 13 \text{ الف) (د)}$$

$$\rightarrow \frac{0}{-12} \quad \checkmark$$

$$2x^2 - x + 2 = 0 \rightarrow 1 - \frac{4(2 \times 2)}{-12} = -15 \text{ ب) (ب)}$$

$$\rightarrow \frac{0}{-12} \quad \checkmark$$

$$2x^2 - 4x + 2 = 0 \rightarrow 14 - \frac{4(2 \times 2)}{14} = 0 \text{ ج) (ب)}$$

$$\rightarrow \frac{0}{14} \quad \checkmark$$

$$2x^2 - x + 1 = 0 \rightarrow 1 - \frac{4(2)}{-1} = 9 \text{ د) (ب)}$$

$$\rightarrow \frac{0}{-1} \quad \checkmark$$

فرمول (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right)$ $\checkmark$

(الف) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = + \rightarrow a < \frac{g}{\lambda} \checkmark$

(ب) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = 0 \rightarrow a = \frac{g}{\lambda} \checkmark$

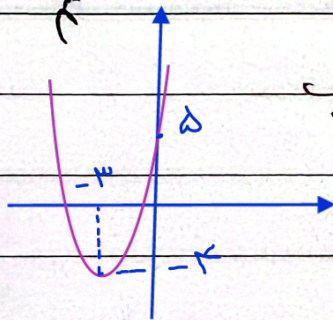
(ج) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = - \rightarrow a > \frac{g}{\lambda} \checkmark$

(د) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = +\infty \rightarrow a \leq \frac{g}{\lambda} \checkmark$

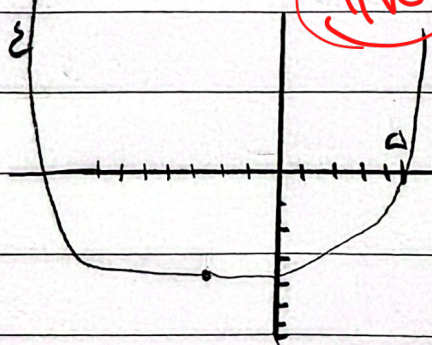
(الف) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = -3 \checkmark$

$\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = -\frac{14}{2} s = -7$

عرض از مبدا است!



(ب) $\rightarrow$



$\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = 2 \checkmark$

$\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = -\frac{14}{2} s = -7$

(ب) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = 3$

$y = -x^2 + x - 3 \rightarrow -x^2 + x - 3 = 0$ $\rightarrow x = 1$

(الف) (الف) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 + a s_0 \right) = 1 \checkmark$



$S = \frac{b}{a} = -\frac{3}{1} = -3$

$P = \frac{c}{a} = -\frac{2}{1} = -2$

$3 - (3 \times 3 - 2) = 27 + 18 = 45$

(الف) $3 - (-2 \times 2) = 9 + 4 = 13$