

$$\Delta = 25 - 12 \times 13 > 0 \text{ مثبت}$$

$$\Delta = b^2 - 4ac$$

$$\Delta = 1 - 17 \times 10 < 0 \text{ منفي}$$

$$\Delta = 14.1750 = 0 \text{ مثبت}$$

$$\Delta = 1 - 18 \times 7 < 0 \text{ منفي}$$

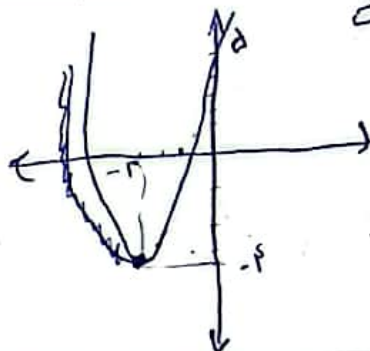
$$\Delta > 0 \Rightarrow 9 - 4a > 0 \Rightarrow 1 > 4a \Rightarrow a < \frac{1}{4}$$

$$\Delta = 0 \Rightarrow 9 - 4a = 0 \Rightarrow a = \frac{9}{4}$$

$$\Delta < 0 \Rightarrow 9 - 4a < 0 \Rightarrow a > \frac{9}{4}$$

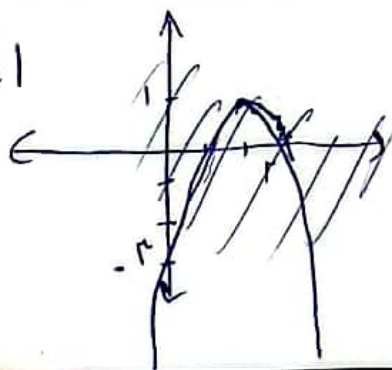
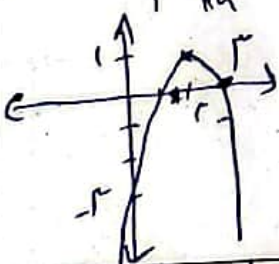
$$\Delta \geq 0 \Rightarrow 9 - 4a \geq 0 \Rightarrow a \leq \frac{9}{4}$$

$$\text{الف) Min} = \left| \begin{array}{c} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{array} \right| = \left| \begin{array}{c} -\frac{1}{2} \\ -\frac{5}{4} \end{array} \right|$$



منحنی سهم باز است

$$\text{Max} = \left| \begin{array}{c} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{array} \right| = \left| \begin{array}{c} \frac{1}{2} \\ \frac{5}{4} \end{array} \right|$$



منحنی سهم باز است

$$-x^2 + 2x - 7 \leq 0 \Rightarrow x \leq \frac{-1 \pm 2}{-1} \Rightarrow x \leq -1 \text{ or } x \leq 3$$

$$S = \frac{1}{a} \times \frac{1}{a}$$

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

$$S^2 - 2P = 9 - (-2) = 11$$

$$S^2 - 2SP = (V - 2)(V - 2) = 3 \times 2$$