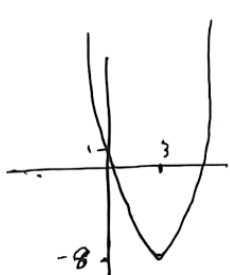
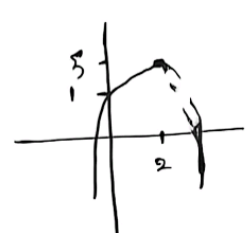


<p>الف) $\rightarrow \min \left \begin{array}{l} 1 \rightarrow \frac{b}{2a} \\ -1 \rightarrow \frac{D}{4a} \end{array} \right.$</p> <p>ب) $\max \left \begin{array}{l} \frac{-3}{-4} = \frac{3}{4} \\ \frac{31}{-8} = -\frac{31}{8} \end{array} \right.$</p>	۱
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<p>الف) $\min \left \begin{array}{l} 3 \\ -8 \end{array} \right.$</p> 	<p>ب) $\max \left \begin{array}{l} 2 \\ 5 \end{array} \right.$</p> 	۲
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<p>$\alpha/\beta = -2$ $\alpha + \beta = 1$</p> <p>$\Rightarrow \beta = 2, \alpha = -1 \Rightarrow 4\alpha^3 + K\alpha^2 - 9\alpha - 2 = 0$ $\Rightarrow 32 + 4K - 9 - 2 = 0 \Rightarrow K = -3 \checkmark$</p> <p>$\alpha = -\frac{2}{\beta}$ $\Rightarrow \frac{-2 + \beta^2}{\beta} = 1 \Rightarrow \beta^2 - \beta - 2 = 0$</p>	۳
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<p>$\sqrt{\alpha} - \sqrt{\beta} = 1 \Rightarrow \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \Rightarrow 3\frac{m^2}{z^2} - 2\sqrt{m} - 1 = 0$ $\Rightarrow z = -\frac{1}{3} \times$ $\Rightarrow z = 1 \checkmark$</p> <p>$\sqrt{m} = 1 \Rightarrow m = 1$ $D = 16$</p> <p>$\Rightarrow p_2 = \frac{c}{a} = \frac{-m}{2} = -\frac{1}{2}$ $z = \frac{-2 \pm 4}{6} \Rightarrow \frac{1}{3}$</p>	۴
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$$J_{\min} = \frac{7}{8} \Rightarrow \frac{-\Delta}{4a} = \frac{7}{8}$$

$$\frac{9-4a^2}{4a} = \frac{-7}{8} \Rightarrow -8a^2 + 7a - 18 = 0$$

$$\Delta < 0 \Rightarrow \text{C.E.}$$

6

$$\left. \begin{array}{l} \alpha + \beta = a + 1 \\ \alpha\beta = a \\ \beta = \alpha + 2 \end{array} \right\} \Rightarrow a = 2\alpha + 1 \Rightarrow \alpha/\beta = 2\alpha + 1 \Rightarrow \alpha = \frac{1}{\beta - 2} \Rightarrow \alpha = 1$$

$$\beta = 3 \\ a = 3$$

maximize

$$\left\{ \begin{array}{l} \xi = b \\ \xi + \xi = 10 \end{array} \right. \Rightarrow \xi = 4, \xi = 6 \rightarrow b = 24$$

$$\xi - \alpha\beta = 24 - 3 = 21$$

7

entz, $\frac{-a}{2a} = \frac{1}{2}$

$$\frac{-a^2 - 8a}{4a} = \frac{-a - 8}{4}$$

$$\Rightarrow \frac{-a - 8}{4} = \frac{b}{2} \cdot \frac{b}{2} - 1 \Rightarrow a = -4 \left. \begin{array}{l} \\ b = 2 \end{array} \right\} \Rightarrow b - a = 6$$

8

$$\alpha\beta = \frac{\beta}{25\alpha} \Rightarrow 25\alpha^2 = 1 \Rightarrow \alpha^2 = \frac{1}{25} \Rightarrow \alpha = 1/5$$

$$1/5 + \beta = -4/5 \Rightarrow \beta = -1$$

maximize

$$\Rightarrow y = 5x^2 + 4x - 1$$

$$\Delta > 0$$

$$\text{max} \left\{ \begin{array}{l} \frac{-b}{2a} = \frac{-4}{10} \rightarrow \ominus \\ \frac{-\Delta}{4a} = \frac{-20}{20} \rightarrow \ominus \end{array} \right\} \text{Bei}$$

9

$$\frac{c}{a} = a + b - 1 \Rightarrow ab = a + b - 1$$

$$\frac{-b}{a} = a^2 + b^2 - 12 \Rightarrow a + b = a + b - 2(a + b - 1) - 12$$

$$\Rightarrow 2(a + b) - 1 = -12 \Rightarrow a + b - 1 = -6$$

$$\Rightarrow a + b = -5$$

10