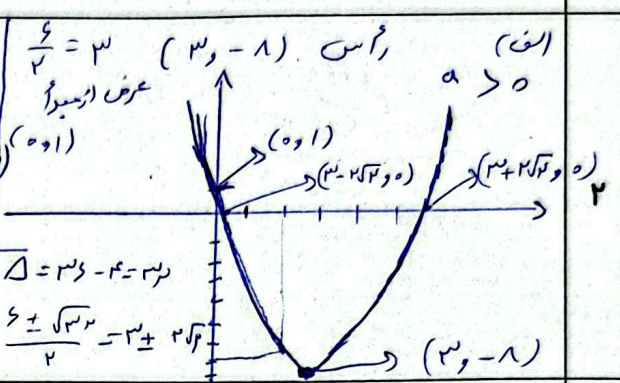
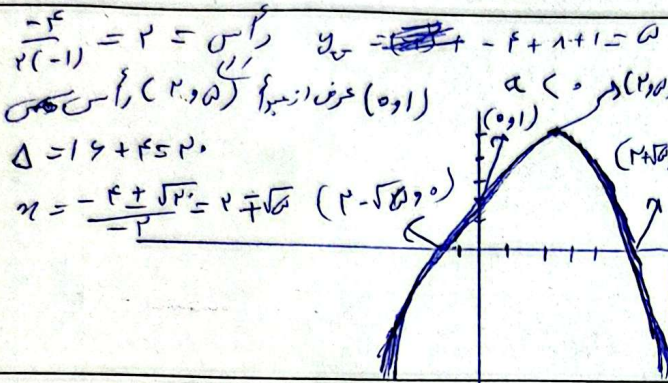


الف) $y = 2x^2 - 4x + 1$ رأس $x_v = \frac{-b}{2a} = \frac{4}{4} = 1$ $y_v = 2 \times 1^2 - 4 \times 1 + 1 = -1$

رأس = (1, -1) نوع مینیمم دارد $a > 0$

ب) $y = -2x^2 + 3x - 0$ رأس $x_v = \frac{-b}{2a} = \frac{-3}{-4} = \frac{3}{4}$ $y_v = -2 \times (\frac{3}{4})^2 + 3(\frac{3}{4}) - 0 = \frac{-9}{8} + \frac{9}{4} = \frac{9}{8}$



$\frac{-b}{a} = \alpha + \beta + \gamma = \frac{-14}{4}$

$\alpha\beta\gamma = \frac{2}{4} \parallel -\alpha\beta\gamma = -(-2) \times \gamma = \frac{1}{4} \Rightarrow \gamma = -\frac{1}{4}$

$4(-\frac{1}{4}) + 14(\frac{1}{4}) + \frac{9}{4} - 2 = 0 \Rightarrow k = \frac{13}{4}$

$x^2 - 2mx + m = 0$
 $\alpha + \beta = 2m$
 $\alpha\beta = m$
 $(\sqrt{\alpha} - \sqrt{\beta}) = 1$
 $(\sqrt{\alpha} - \sqrt{\beta})^2 = 1$
 $\alpha + \beta - 2\sqrt{\alpha\beta} = 1$
 $2m - 2\sqrt{2m} = 1$
 $m - \sqrt{2m} = \frac{1}{2}$
 $(\sqrt{2m} - 1)^2 = 2m - 2\sqrt{2m} + 1 = 2m - 1$
 $2\sqrt{2m} - 1 = 2m - 1$
 $2\sqrt{2m} = 2m$
 $\sqrt{2m} = m$
 $m = 1$
 $\alpha\beta = -\frac{m}{4}$
 $\alpha\beta = \frac{1}{4}$

$2x^2 - (m+2)x + m = 0$
 $\Delta = 1 + 4m(m+2) = 4m^2 + 8m + 1$
 $\Delta = 1 + 4m^2 + 8m = 4m^2 + 8m + 1$
 $m = \frac{1 \pm \sqrt{4m^2 + 8m + 1}}{4}$
 $m = 1$
 $m = 2$
 $\frac{m}{4} = \frac{1}{4}$

