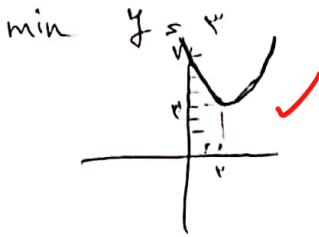


الف - $x = \frac{-b}{2a} = 2$



ب - $x = \frac{-b}{2a} = \frac{-4}{-2} = 2$

max $y = 3$

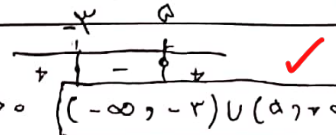


۲

۱

الف) $A > 0 \Rightarrow m^2 - 2m + 1 - 5m - 12 > 0$

$m^2 - 7m - 11 > 0 \Rightarrow (m+3)(m-5) > 0$

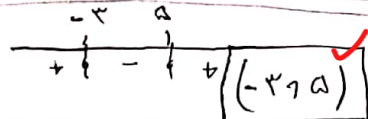


۲

ب) $\Delta \leq 0$

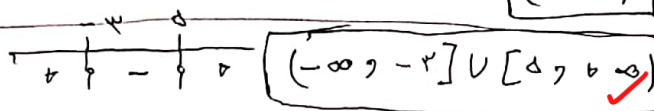
$m = -3, 5$

ج) $\Delta < 0 \Rightarrow m^2 - 2m - 11 < 0$



۲

د) $\Delta \geq 0 \Rightarrow (m+3)(m-5) \geq 0$



۲

۳

الف) $5m^2 + 8m + 4 - 40m + 20 = 0 \Rightarrow 5m^2 - 32m + 24 = 0$

$p > 0 \Rightarrow s < 0$

$p = \frac{10}{m-2} > 0 \Rightarrow m > 2$ ①

$s = \frac{4(m+1)}{m-2} < 0 \Rightarrow (-1, 2)$ ②

① $\cap$ ② = $\emptyset$

ب) $s < 0 \Rightarrow \frac{4(m+1)}{m-2} < 0$

$p < 0 \Rightarrow \frac{10}{m-2} < 0 \Rightarrow m < 2$ ③

$m = (-1, 2)$ ④ $\Rightarrow$ ① $\cap$ ③ = $(-1, 2)$

۲

الف) $\Delta > 0 \Rightarrow \frac{c}{a} < 0 \Rightarrow \frac{10}{m-2} < 0 \Rightarrow m < 2$

۲

ب) $-2 = \frac{-b}{2a} \Rightarrow \frac{4m+2}{4m-8} = -2 \Rightarrow m \leq 1$

۴

$\frac{4m^2}{4} - 2(1) + \frac{4}{4} = 0 \Rightarrow 4m^2 - 12m + 4 = 0$

$\Delta \geq 0$

$\sin \alpha \geq \frac{1}{2}$

$\sin \alpha \geq 1$

$\sin \alpha \geq 1 \Rightarrow \sin \alpha = 1 \Rightarrow \sin \alpha = \pm 1$

$4m^2 - 12m + 4 = 0$

$(m-2)(m-1) = 0$

$\frac{4}{4}$

$m = \frac{1}{2}$

۲

۵

$n \neq \pm 1$ $r_m r - r_m - a$ $n^r - r_m - r$ $(m - a)(m + r)$ $\frac{a}{r} = -\frac{r}{r}$ $r_m r - r_m - 1$ $n^r - r_m - r$ $n - r \quad m + 1$ $\frac{r}{r} = -\frac{1}{r}$ $x_{max} = -\frac{1}{r} = \boxed{\frac{1}{r}}$ $y_{max} = \boxed{\frac{r \wedge 9}{r r}}$ $\frac{(m-1)(r_m+1)(r_m-a)(m+1)}{(1-m)(1+a)}$ $= -4m^r + 17m + a$	(r) f
$r s = d p + v$ $-\frac{10}{m} = \frac{r_m + y - v_m}{m}$ $r_m + y - v_m + 10 = 0$ $r_m = 14$ $m = 5$ $S = \frac{m+y}{m} = \frac{r}{y}$ $p = -\frac{r}{m} = -\frac{1}{y}$ $\alpha r + \beta r = s^r - r p$ $\frac{a}{r} - r \left(-\frac{1}{y} \right) = \frac{a}{r} + \frac{a}{r} = \boxed{\frac{1}{r}}$	(r) y
$\frac{\alpha \alpha + \beta^0}{d \beta^r}$ $\frac{\beta^r}{a} + \frac{\alpha}{d \beta^r} = \frac{\beta^r + \alpha^r}{a}$ $= \frac{s^r - r s p}{a} = \frac{a^r - r_0}{a}$ $\alpha \beta = r$ $\beta = \frac{r}{\alpha}$	s (r) 1
$r(-r) + 10 = r$ $9a - r b + 5 = 5$ $b = 4a$ $r(r) + 10 = 15$ $15 = 5a + 4b + 5$ $5a + 4a = 10 \quad a = 1$ $b = 4a = 4$ $\omega, \alpha = \frac{-b}{r a} = \boxed{\frac{-4}{r}}$	(r) 9
$r_m r + (m+1)n + m + y = 2$ $r_m r + m n + m + y = 0$ $m^r - 1m - 1 = 0$ $(m-1)(m+1)$ $m = -1$ $r_m r + 4m + 9 = (m+4)^r$ $m = -4$ $r_m r - r_m + 1 = 0$ $(m-1)^r = \boxed{m=1}$	(r) 1.