

$$\max = 7 \rightarrow x = -\frac{b}{-r} = \frac{b}{r}$$

$$(1) \quad y = -\frac{D}{\epsilon \alpha} = \frac{5r + 1r}{+r} = v \rightarrow b = \pm \epsilon \begin{cases} y = -4r + \epsilon x + c & x = r \\ y = -4r - \epsilon x + c & x = -r \end{cases}$$

$$x = r \rightarrow y = v \quad b = \pm r$$

$$x = -r \rightarrow y = v$$

$$(2) \quad \text{حي} \quad f(x) = x^2 + 2x^r + c = (x^r + 1)^r + r = 0 \rightarrow (x+1)^r = -r$$

المسألة ←

$$(3) \quad f(x) = (2 - x^r)^r - r(2 - x^r) - 10$$

$$t = 2 - x^r \rightarrow t^r - r t - 10 = 0 \rightarrow (t - 0)(t + c) = 0$$

$t = 0$
 $t = -c$

$$0 = 2 - x^r \rightarrow \dots$$

$$-c = 2 - x^r \rightarrow x = \pm \sqrt[r]{2 - c} \rightarrow \dots$$

$$\alpha \neq \beta, \quad B = \alpha + r \rightarrow \frac{b}{\alpha} = r\alpha + r \rightarrow r\alpha + r = 2 \rightarrow \alpha = 1$$

$\beta = c$

$$(4) \quad \frac{m}{\alpha} = 1 \times c = \frac{m}{\epsilon} \rightarrow \boxed{m = 1r} \quad , \quad \alpha \neq 1$$

$\beta = c$

$$(5) \quad r x^r - 4x + m - 1 = 0$$

$$\alpha + \beta = \frac{r}{r} = 1 = r \rightarrow \alpha + \beta = r \rightarrow r\alpha + r\beta = 2$$

$\boxed{r\alpha = 2 - r\beta}$

$$r\alpha - \beta = 2 \rightarrow 2 - r\beta - \beta = 2 \rightarrow \begin{cases} \beta = 0 \\ \alpha = r \\ \frac{c}{\alpha} = 0 \rightarrow m = 1 \end{cases}$$

$$r x^r - 4x = 0 \quad \begin{cases} x = 0 \\ x = r \end{cases}$$

$$(6) \quad -m x^r + \epsilon x + m^r - \epsilon = 0$$

$$\alpha = \frac{1}{\beta} \rightarrow \alpha\beta = 1 \rightarrow \frac{c}{\alpha} = 1 \rightarrow \frac{m^r - \epsilon}{-m} = 1$$

$$m^r + m - \epsilon = 0 \rightarrow \begin{cases} m = 1 \\ m = -r \end{cases}$$

$(m + r)(m - 1) = 0$

④ $x'' - mx + r = 0$

$\alpha B'' = \epsilon \rightarrow (\alpha B)B = \epsilon \rightarrow rB = \epsilon \rightarrow B = \frac{\epsilon}{r}$

$\alpha \frac{B}{a} = \epsilon \rightarrow \alpha = \frac{a}{\epsilon}$

$\alpha = \frac{\epsilon}{r}$

$B = \frac{a}{\epsilon}$

⑤ $x'' - \epsilon x + m = 0$

$\alpha = rB \rightarrow \alpha + B = \epsilon$

$\epsilon B + B = \epsilon \rightarrow B = 1 \rightarrow m = \frac{\epsilon}{a} = \alpha B = r$
 $\alpha = r$

$x'' - vx + r = 0$ $\alpha B = r \rightarrow B = \frac{r}{\alpha}$

⑥ $\alpha'' + \frac{A}{d^2} = \alpha'' + B'' \rightarrow \alpha'' + B'' = (\alpha + B)'' - 2\alpha B(\alpha + B)$

$\alpha'' + B'' = \sqrt{c} \chi(v) x'' = 0$

$\alpha'' + \frac{1}{\alpha c} = 0$

⑦ $h(t) = -1.6t^2 + 0.6t$

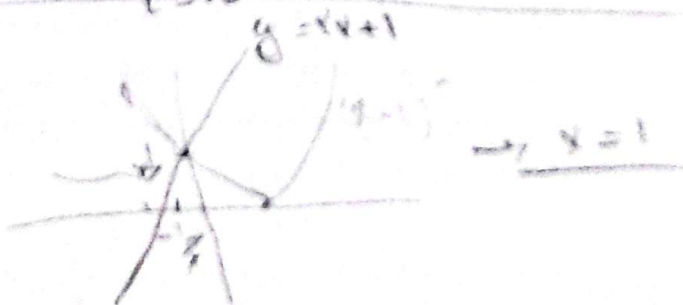


$t_s = \frac{-b}{2a} = \frac{-0.6}{-3.2} = 0.1875 \rightarrow t_s = 0.1875$

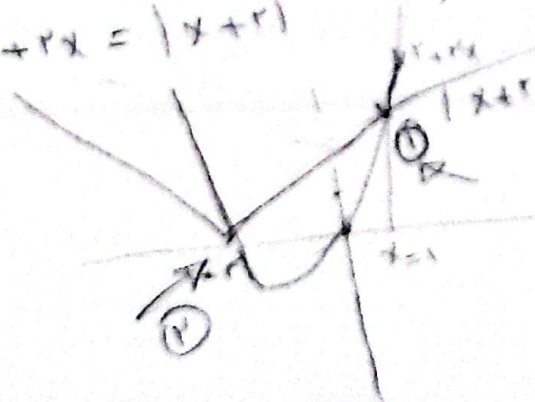
$h_s = \frac{-D}{4a} = \frac{0.09}{-3.2} \Rightarrow h_{max} = 0.028125$

عند $h=0 \rightarrow -1.6t^2 + 0.6t = 0 \rightarrow t = 0 \rightarrow t = 0.375$

⑧ $(x-1)^2 = 2x+1$



⑨ $x^2 + rx = |x+r|$



$x = 1$
 $x = -r$