

الف) $z_1^3 = 2x^2 + 9x$ و $z_2^3 = 2x^2 + x \rightarrow z_1^3 = z_2^3 \rightarrow z_1 = z_2$ (تابه)

ب) $x > 0$ $|z_1| + 0 = 3 \rightarrow |z_1| = 3 \rightarrow z = \pm 3$ نیست

ج) $x = 3^k$ $z = 3$ فقط برای $k=1$ (شماره ۲۷۰)

د) $0 = \cos z \rightarrow 0.59, 2.76$ تابع نیست

الف) $x^2 - 5x + 10 \rightarrow x(x-5) < 0 \rightarrow D_f = R - \{0, 5\}$

ب) $x^2 - 7x + 12 \rightarrow \Delta \rightarrow -10 \rightarrow D_f = R$ (ریشه حقیقی دارد)

ج) $\Delta \rightarrow -10 \rightarrow D_f = R$

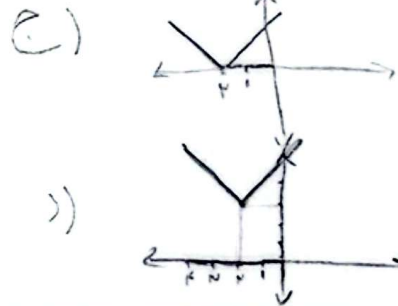
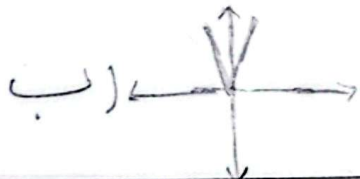
د) $x^2 - 6x + 9 \rightarrow x^2(x-2)(x+2) \rightarrow D_f = R - \{-2, 2\}$

الف) $(9-x), (x-2) > 0 \rightarrow 9 > x > 2 \rightarrow [2, 9] = D_f$

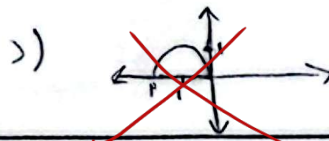
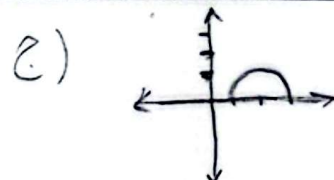
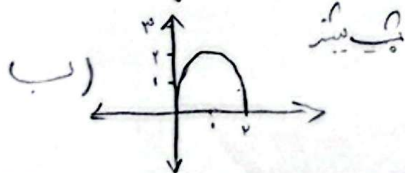
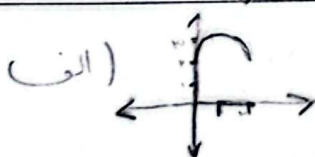
ب) $x^2 + 1 > 0 \rightarrow x \in [-1, 1] \rightarrow D_f = R - \{-1, 1\}$

ج) $x^2 > 10$ و $x - 5 > 0 \rightarrow x > 5$ و $x > 10 \rightarrow D_f = [5, 100] \cup [100, \infty)$

د) $|x| + x^2 > 0 \rightarrow D_f = R - \{0\}$



د)



(الف)

9

ج) $\frac{1}{2} \quad - \quad \frac{1}{2} \quad - \quad \frac{1}{2} \quad +$

9

الف) $\frac{-\phi + \phi}{r} - \frac{\phi + \phi}{r}$

9

ج)

نقطہ

$\frac{+}{r_1} - \frac{0}{r_2} - \frac{+}{r_3}$

Y

الف) $\frac{(x-1)^2(x+2)}{x-3} = x^2 - \frac{2}{x-3} + \frac{4}{x-3}$

9

$$\hookrightarrow \frac{(x-1)(x-2)}{(x-1)(x-2)} \rightarrow \frac{+ \oplus -}{+ \oplus -}$$

^

الف) $\frac{x^4(x^4-1)}{x^4+x^2-2}$ $\rightarrow$ $\begin{matrix} 0^* \\ \pm 1 \end{matrix} \rightarrow \frac{*}{+1-0-1+}$ 5

9

$$\rightarrow \frac{x^2 + 4x + 6 \rightarrow \Delta \rightarrow -V \text{ (مقلوبه)}}{x^2 + 4x + 4 \rightarrow \Delta \rightarrow -A \text{ (")}} = \rightarrow R \text{ --- } +$$

الف) $\frac{x^n - 1}{x^n - x} > 0 \rightarrow \frac{(n-1)(x^{n-1} + x^{n-2} + \dots + x + 1)}{n(n-1)(x+1)} \rightarrow \Delta = -n(x^{\frac{n-1}{2}})$

④

$$b) \frac{(x-f)(x+f)}{(x-1)(x-f)} \rightarrow \frac{(-\infty, -1) \cup (0, 1) \cup (1, +\infty)}{+\frac{f}{x} - \frac{1}{1} + \frac{1}{f} + \rightarrow (-\infty, -f) \cup (1, f) \cup (f, +\infty)}$$

1.