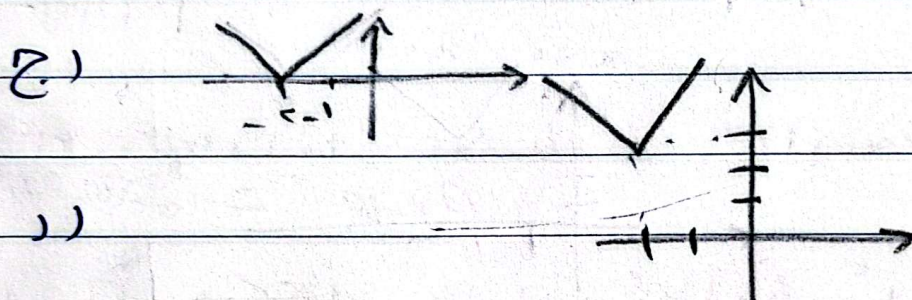
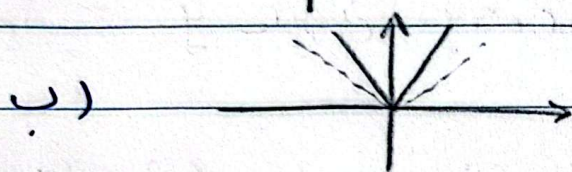
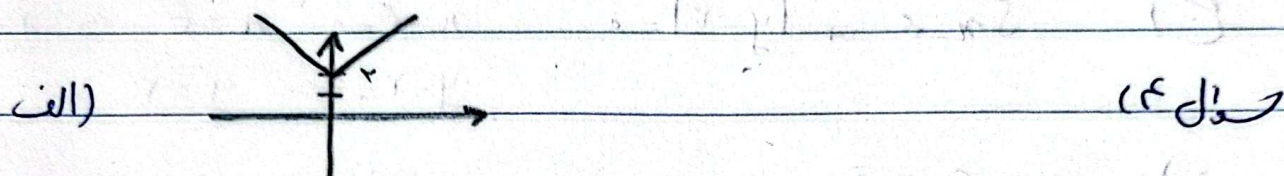
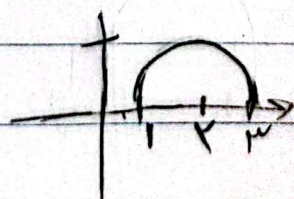
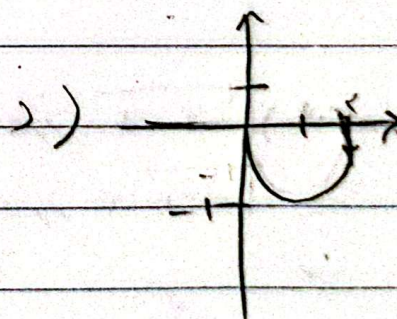
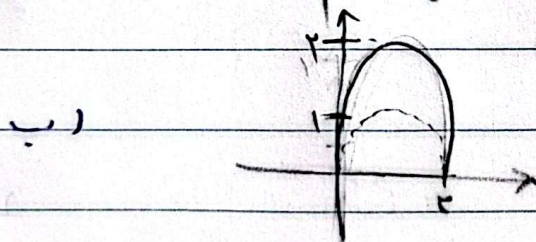
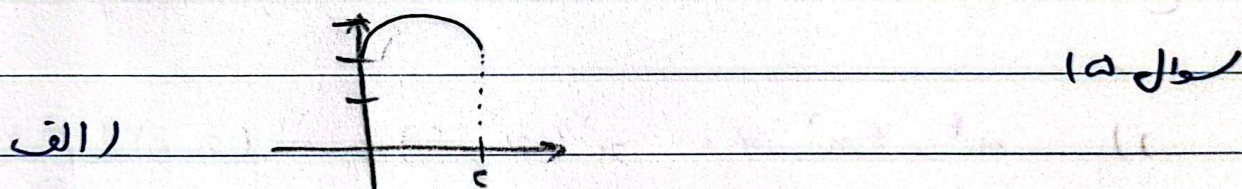


ج) $\sqrt{x-2} \geq 0 \quad x \geq 2 \quad x-2 \neq 0 \quad x \neq 2$
 $D_f = [2, +\infty] - \{2\}$

د) $|x| + x^2 \neq 0 \quad D_f = \mathbb{R} - \{0\}$

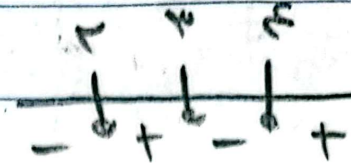


د)

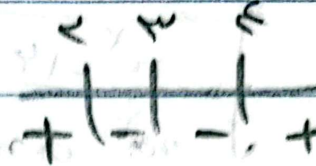


الف) $(x-2)^2 (x-3)^3 (x-4)^4$

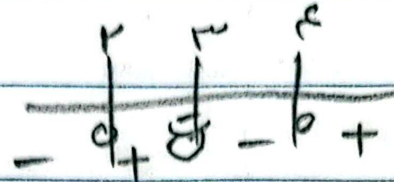
سوال 9



ب) $(x-2)^2 (x-3)^2 (x-4)^4$

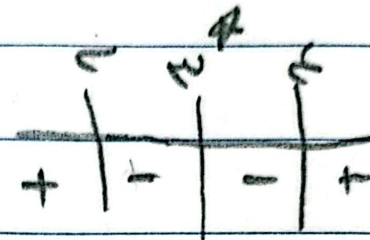


الف) $\frac{(x-2)^2 (x-4)^4}{x-3}$



سوال 10

ب) $\frac{(x-2)^2 (x-4)^4}{(x-3)^2}$

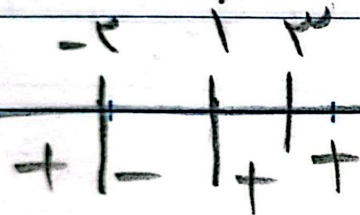


سوال 11

الف) $\frac{x^3 - 3x + 2}{x-3}$

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

$x=3$



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

$$\begin{array}{c} 1 \quad 2 \quad 3 \\ | \quad | \quad | \\ + \quad + \quad - \quad + \end{array}$$

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

رشته‌ها

سوال ۱۹

$$\begin{array}{c} 1 \quad 0 \quad 1 \\ | \quad | \quad | \\ - \quad + \quad - \quad + \end{array}$$

الف) $y = \sqrt{\frac{x^3 - 1}{x^3 - x}} = \frac{(x-1)(x^2 + x + 1)}{x(x-1)(x+1)}$ (سوال ۱)

$$\begin{array}{c} 1 \quad 0 \quad 1 \\ | \quad | \quad | \\ + \quad - \quad + \quad + \end{array} D_f = (-\infty, -1) \cup (0, +\infty)$$

ب) $y = \sqrt{\frac{x^2 - 14}{x^2 - 2x + 4}} = \frac{(x-4)(x+4)}{(x-1)(x-4)}$

$$\begin{array}{c} 1 \quad 1 \quad 4 \\ | \quad | \quad | \\ + \quad - \quad + \quad + \end{array} D_f = (-\infty, -4) \cup (1, 4) \cup (4, +\infty)$$