

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۵... کلاس A

الف) $f(x) + 2$	ب) $2f(x)$	ج) $f(x-1)$	د) $f(x)$	۱
الف) $x^2 - 5x + 6 > 0 \rightarrow (x-2)(x-3) > 0$ $\frac{2}{+} \frac{3}{-} \frac{+}{+} \rightarrow D_f = (-\infty, 2) \cup (3, +\infty)$	ب) $x^2 - 4x + 5 < 0 \rightarrow (x-1)(x-5) < 0$ $\frac{1}{+} \frac{5}{-} \frac{+}{+} \rightarrow D_f = (1, 5)$	۲		
ج) $x^2 + 9x + 5 \geq 0 \rightarrow (x+5)(x+1) \geq 0$ $\frac{-5}{+} \frac{-1}{-} \frac{+}{+} \rightarrow D_f = (-\infty, -5] \cup [-1, +\infty)$	د) $x^2 - 7x + 4 \leq 0 \rightarrow (x-1)(x-4) \leq 0$ $\frac{1}{+} \frac{4}{-} \frac{+}{+} \rightarrow D_f = [1, 4]$	۲		
الف) $\frac{x^2 - 3x + 2}{x-5} < 0 \rightarrow \frac{(x-1)(x-2)}{(x-5)} < 0$ $\frac{1}{-} \frac{2}{+} \frac{5}{-} \frac{+}{+} \rightarrow D_f = (-\infty, 1) \cup (2, 5)$	ب) $\frac{x^2 - 1}{x^2 - 9x + 5} \geq 0 \rightarrow \frac{(x-1)(x+1)}{(x-1)(x-5)} \geq 0$ $\frac{-1}{+} \frac{1}{-} \frac{5}{-} \frac{+}{+} \rightarrow D_f = (-\infty, -1] \cup (5, +\infty)$	۳		
الف) $y = \sqrt{\frac{x^2 - 1}{x^2 - x}} \rightarrow \frac{x^2 - 1}{x(x+1)(x-1)} \geq 0$ $\frac{-1}{+} \frac{1}{+} \frac{+}{+} \rightarrow D_f = \mathbb{R} - \{-1, 0, 1\}$	ب) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 6}} \rightarrow \frac{(x+4)(x-4)}{(x-2)(x-3)} \geq 0$ $\frac{-4}{+} \frac{2}{-} \frac{3}{-} \frac{+}{+} \rightarrow D_f = (-\infty, -4] \cup (2, 3) \cup (4, +\infty)$	۴		
الف) $y = \sqrt{x - \sqrt{2-x}}$ $\begin{cases} x - \sqrt{2-x} \geq 0 \\ x - \sqrt{2-x} \geq 0 \end{cases} \rightarrow x \geq \sqrt{2-x}$ $\sqrt{2-x} \leq x$ $2-x \leq x^2$ $x = -1$ $\rightarrow x \geq -1$ $\frac{-1}{+} \frac{2}{-} \frac{+}{+} \rightarrow D_f = [-1, 2]$	ب) $y = \sqrt{x - \sqrt{x-2}}$ $\begin{cases} x - \sqrt{x-2} \geq 0 \\ x - \sqrt{x-2} \geq 0 \end{cases} \rightarrow x \geq \sqrt{x-2}$ $\sqrt{x-2} \leq x$ $x-2 \leq x^2$ $\rightarrow x \leq 11$ $\frac{2}{+} \frac{11}{-} \frac{+}{+} \rightarrow D_f = [2, 11]$	۵		

