

$$y = \sqrt{x - f(x)}$$

$$f(x)$$

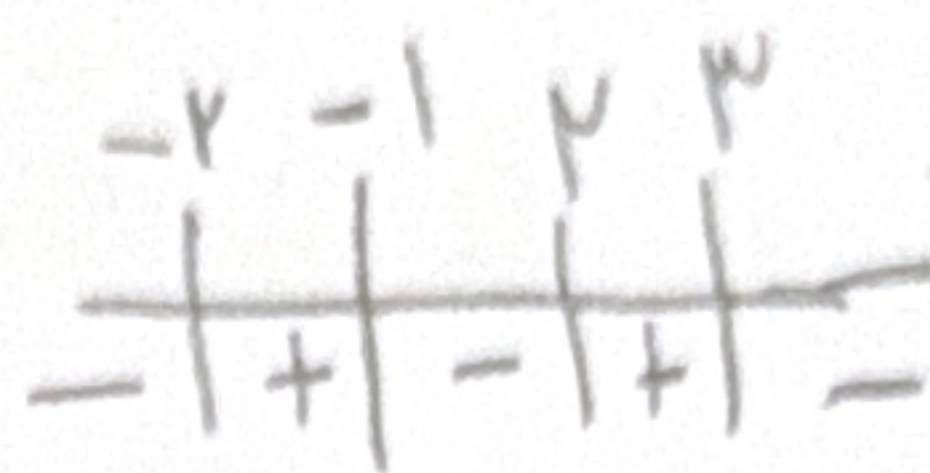
$$D_f = (-2, -1] \cup (2, 3]$$

$$f(x) = 0$$

$$1) x = -2, 2$$

$$x = -1, 3$$

$$x - f(x) = 0$$



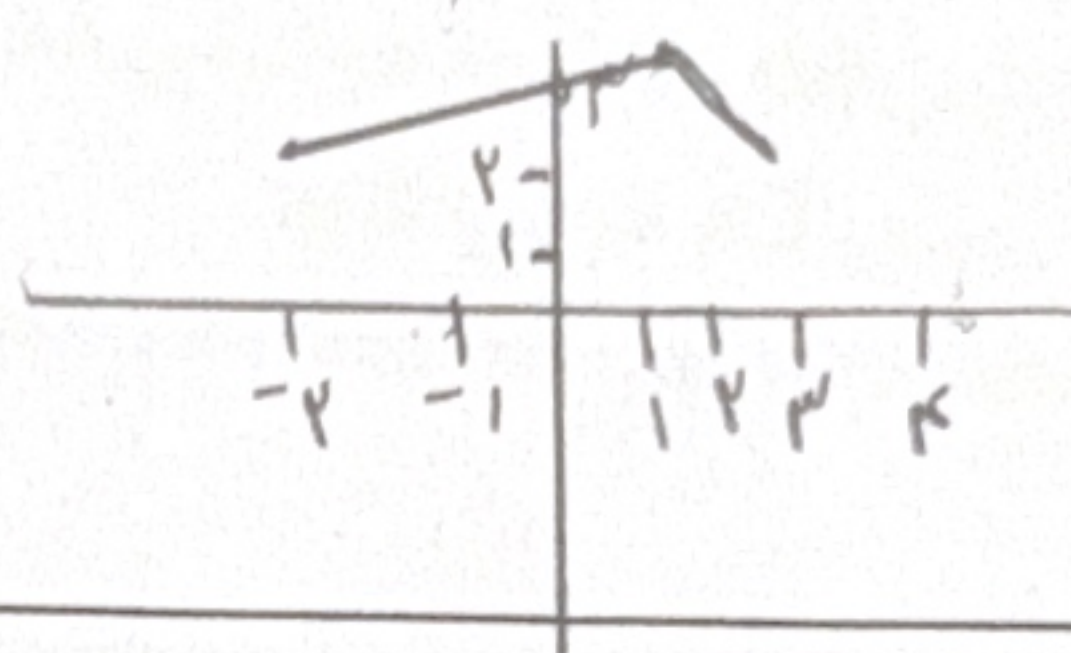
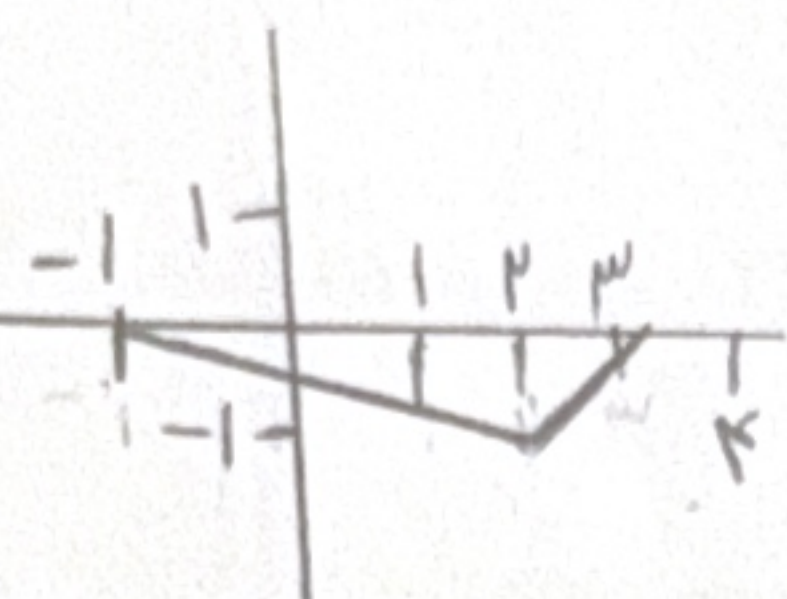
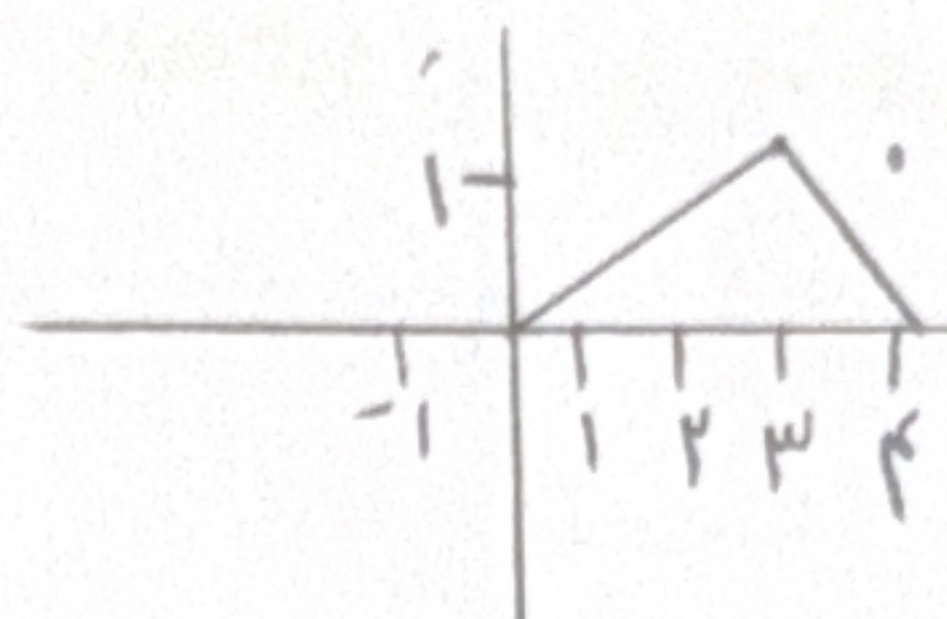
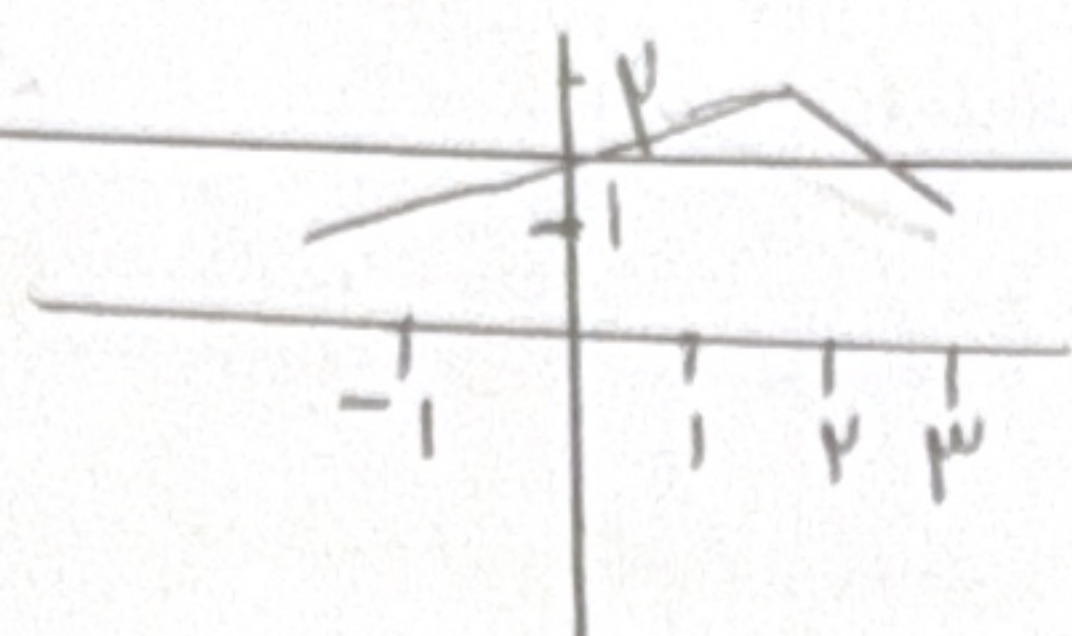
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$$الف) f(x) + 1$$

$$ب) f(x - 1)$$

$$ج) -f(x)$$

$$د) f(x + 1) + 2$$



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$$f(x) = \sqrt{x^3 - 2x}$$

$$x^3 - 2x = x(x^2 - 2) \geq 0 \quad D_f = [-\sqrt{2}, 0] \cup [\sqrt{2}, +\infty)$$

$$g(x) = \sqrt{x} \sqrt{x^2 - 2} \quad x \geq 0 \quad x^2 - 2 \geq 0 \quad D_g = [\sqrt{2}, +\infty)$$

$$f \neq g$$

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$$f(x) = [\sqrt{x} - \lfloor \sqrt{x} \rfloor] \Rightarrow 0 \leq \sqrt{x} - \lfloor \sqrt{x} \rfloor < 1 \quad f(x) = 0, x \geq 0$$

$$g(x) = \sqrt{x - |x|} \quad x \geq 0 \Rightarrow x - |x| = 0 \Rightarrow g(x) = 0$$

$$D_f = D_g = [0, +\infty)$$

$$f(x) = g(x) = 0$$

$$f = g$$

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$$f(x) = \sqrt{x|x|} \text{ و } g(x) = x$$

$$D_g = \mathbb{R} \Rightarrow f \neq g$$

$$\sqrt{x|x|} = \sqrt{x^2} = x \quad x|x| = -x^2 < 0 \Rightarrow D_f = [0, +\infty)$$

$$f(x) = \frac{x}{|x|} \text{ و } g(x) = \frac{|x|}{x} \quad \text{تعریف نشده اند}$$

$$f(x) = g(x) = 1 \Rightarrow f = g$$

$$f(x) = g(x) = -1$$

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