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$$f(x) = (x-1)\sqrt{1-x} \rightarrow 1-x \geq 0 \rightarrow x \leq 1$$

$$g(x) = -\sqrt{(1-x)^3} \rightarrow Dg = \mathbb{R}$$

$D_f \neq D_g$ برابر نیستند.

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$$f(x) = x\sqrt{x} \rightarrow x \geq 0 \rightarrow D_f = [0, +\infty)$$

$$g(x) = \sqrt{x^3} \rightarrow x^3 \geq 0 \rightarrow x \geq 0 \rightarrow D_g = [0, +\infty)$$

برابرند.

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$$f(x) = [\sqrt{x} - [\sqrt{x}]] \rightarrow x \geq 0 \rightarrow D_f = \mathbb{R}^+, \{0\}$$

$$g(x) = \sqrt{x-|x|} \rightarrow x-|x| \geq 0 \rightarrow x \geq |x| \rightarrow D_g = \mathbb{R}^+, \{0\}$$

برابرند

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$$f+g = \{(0,2)(1,3)(2,4)(3,4)\} \quad f-g = \{(0,-2)(1,1)(2,0)(3,-4)\}$$

تعریف نشده

$$\left(\frac{f+g}{f-g}\right) = \{(0,-1)(1,4)(2,-\frac{4}{3})\}$$

الف) $\left(\frac{f+g}{f-g}\right)(1) = 4$ ب) $\left(\frac{f+g}{f-g}\right)(2) =$ تعریف نشده

ج) $f(0) \times g(-1) = 0 \times 1 = 0$

الف)

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$$3x-1=2 \rightarrow x=1, \quad 3x-1=-1 \Rightarrow x=0, \quad 3x-1=0 \Rightarrow x=1/3$$

$$3x-1=-2 \rightarrow x=-1/3, \quad 3x-1=3 \Rightarrow 4/3=x$$

$$g(x) = \{(1,1)(0,4)(1/3,2)(-1/3,2)(4/3,-1)\}$$

ب)

$$|x|=2, \quad |x|=0, \quad |x|=4 \rightarrow x = -2, -1, 0, 2, 3$$

$$h(x) = \{(-2,1)(-1,1), (0,4)(-3,-1)(3,-1)\}$$