

19, 15

تعیین

دارد هم فته A

نام دانشجو: ...

$$-2 \leq \frac{x+2}{5} \leq 4 \rightsquigarrow -10 \leq x+2 \leq 20 \Rightarrow D_f = [-12, 18]$$

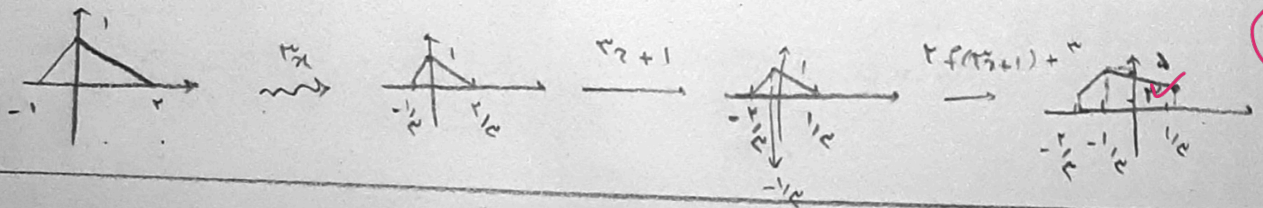
(2)

$$-2 \leq x \leq 4 \Rightarrow -15 \leq x-2 \leq 17 \Rightarrow D_f = [-13, 19]$$

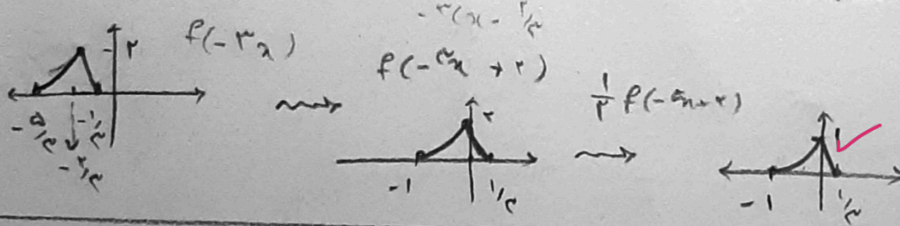
(2)

$$-1 \leq x \leq 3 \Rightarrow -1 \leq \frac{x+1}{2} \leq 2 \Rightarrow D_f = [-3, 3] \rightsquigarrow -1 \leq 2-5x \leq 4 \Rightarrow -\frac{5}{5} \leq x \leq \frac{5}{5} \Rightarrow D = [-1, 1]$$

(2)



(2)



(2)

$$y = -\frac{1}{2}(x-5)^2 + \frac{21}{2} \rightsquigarrow (5, \frac{21}{2})$$

$$y+k = -\frac{1}{2}[(x-h)-5]^2 + \frac{21}{2} \rightsquigarrow y = -\frac{1}{2}(x-5)^2 + \frac{21}{2}$$

$$k = \frac{21}{2} - \frac{21}{2} = 0 \quad h = 5 - 5 = 0$$

$$y = -\frac{1}{2}(x-5)^2 + \frac{21}{2} \Rightarrow x = 5 \pm \sqrt{21-2y}$$

$$x = 1 \leq x \leq 9$$

$$f(x) = \frac{1}{x} \rightsquigarrow y = 1-x f(x+1) \Rightarrow f(x+1) = \frac{1-y}{x}$$

$$\Rightarrow \frac{1}{x+1} = \frac{1}{x} - y \Rightarrow \frac{1}{x+1} - \frac{1}{x} = -y \Rightarrow \frac{x - (x+1)}{x(x+1)} = -y \Rightarrow \frac{-1}{x(x+1)} = -y \Rightarrow \frac{1}{x(x+1)} = y$$

$$x = 1 \Rightarrow y = \frac{1}{2}$$

(2)

$$\begin{aligned} D_f(x+1) &\rightarrow a < x+1 \leq b \Rightarrow a-1 < x \leq b-1 \\ D_g(x+1) &\rightarrow -1 \leq x+1 \leq 6 \Rightarrow -2 \leq x \leq 5 \end{aligned} \Rightarrow D = [-1, 5]$$

(2)

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صفت اول :  $-5 \leq x \leq 5 \Rightarrow -\frac{1}{4} \leq \frac{x^2}{4} + 1 \leq \frac{9}{4} \Rightarrow f \in [-1/4, 9/4]$

چون قدر  $-2 \leq 2f(x) - 2 \leq 1 \Rightarrow 0 \leq 2f(x) \leq 3 \Rightarrow 0 \leq f(x) \leq 1.5$   
 در بازه  $[0, 1.5]$  رادیکال هم باید اعمال نشه!  
 صفت آخر

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صفت اول : انتقال :  $\left| \frac{x-1}{2x-5} \right| + 1 \rightarrow x+1 + \left| \frac{x-1}{2x-5} \right| < 0 \Rightarrow x+1 < 0 \Rightarrow x < -1$  \*

صفت دوم :  $x-1 < 0$  و  $2x-5 < 0$  درون قدر خطی  $\Rightarrow x+1 + \frac{x-1}{2x-5} < 0 \Rightarrow \frac{x^2-2x-5}{2x-5} < 0$

$\frac{x^2-2x-5}{2x-5} < 0$   
 $\Rightarrow \frac{(x-\sqrt{2})(x+\sqrt{2})}{2x-5} < 0$

$\frac{-\sqrt{2} \quad \sqrt{2} \quad 2.5}{-\phi + \phi - \phi +}$   
 $\frac{1}{x} \rightarrow x < -2 \cup \sqrt{2} < x < 2.5$

کبره  
 $x < -\sqrt{2} \Rightarrow x < -2$  و  $x < -\sqrt{2} \Rightarrow x < -2$

$$D_{y_1} = [-r, \Delta] \rightarrow -r \leq x \leq \Delta \rightarrow \frac{-1}{r} \leq \frac{x}{r} + 1 \leq \frac{\Delta}{r} \Rightarrow D_f = \left[-\frac{1}{r}, \frac{\Delta}{r}\right]$$

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$$R_{y_1} = [-1, r] \rightarrow -1 \leq t \leq r \rightarrow -\Delta \leq rt - r \leq 1 \rightarrow 0 \leq |rt - r| \leq \Delta$$

$$0 \leq \sqrt{|rt - r|} \leq \sqrt{\Delta} \Rightarrow R_f = [0, \sqrt{\Delta}]$$