

نام و نام خانوادگی شماره کلاس باسرخامه تشریحی تکلیف شماره ۸

۱. $x \in [-1, 1]$ $\rightarrow f(x) = x - 2, x \in [-1, 1]$ $-1 \leq x \leq 1$ $-\frac{1}{2} \leq x \leq \frac{1}{2}$ $[-\frac{1}{2}, \frac{1}{2}]$ (اض)

$x \rightarrow [-1, -1]$ $D: [-1, -1]$

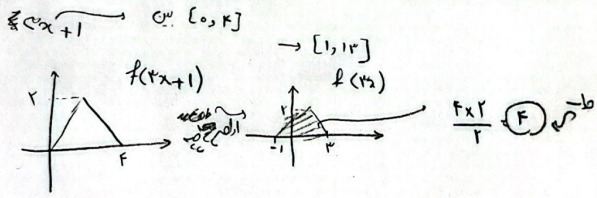
$f[-1, -1] = [-1, -1] - 2 = [-3, -3]$

$\frac{y}{x} = \frac{x+1}{x}$ $y = x + \sqrt{x+1}$ $\rightarrow y = x - 1 + \sqrt{x+1}$ $x = y - 1 + \sqrt{y-1}$

$x = \frac{y^2 - 1}{y}$ $\frac{y}{x} = \sqrt{x+1}$ $x + 1 = \frac{y^2}{x^2}$ $x^2 + x = \frac{y^2}{x}$ $x^3 + x^2 = y^2$

$y = x + \frac{y}{x} \sqrt{x+1}$ $y - x = \frac{y}{x} \sqrt{x+1}$ $\sqrt{y-x} = \sqrt{x+1} \cdot \frac{1}{x}$

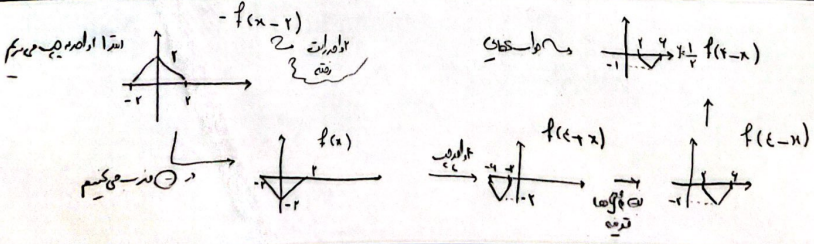
$x + \frac{1}{x} = (\sqrt{y-x} + \frac{1}{x})^2$

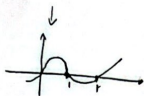
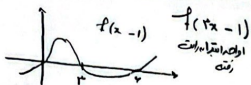


$\frac{x-a}{r} = 1$ $x-a = r$ $x = a+r$ $a + r = -r$

$a = \frac{-r-a}{r}$ $ay = r(x-a)$ $y = -x-a$

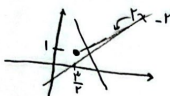
$\frac{-r-a}{r} = \frac{y-a}{r}$ $ra = -c-a$ $a = -\frac{r}{2}$





$$f(rx-1)$$

$$\frac{-r-1}{+1-1} = \dots D: (-\infty, -r] \cup [1, r]$$



$$f(x) = \frac{|r(x-k)-r|}{rx-rk} + \frac{1}{-r}$$

$$\rightarrow k=c$$

$$|rx-rk|-r = |rx-r| \quad |$$

$$|rx-rk|-c = |rx-r| \quad \sim \quad c = \frac{r^2}{2} + rk - r$$

$$q = rk \quad \boxed{k=c}$$

$$y = -\frac{rx-1}{x+1} = \frac{1-rx}{x+1} = \frac{1-\frac{r}{x}}{\frac{x}{x}+1} = \frac{r-rx}{x+1}$$

$$Fxr + Fx - q = Kxr + Kx + r$$

$$\frac{rx-1}{x+1} = \frac{c-rx}{x+1} + K$$

$$\boxed{k=c}$$

$$(F-K)x^2 + (F-F)x - c = \frac{r(K+r)}{x+1}$$

$$\frac{(rx-1)(x+c) - (c-rx)(x+1)}{(x+1)(x+c)} =$$

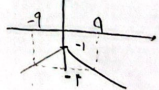
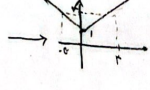
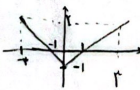
$$\frac{Fx^2 + Fx - q}{x^2 + Fx + K} = K$$

$$\text{eigen } \Delta = 0 \rightarrow 12 + 15K - 4K + c(K-1-rK) = 0$$

$$y = -f\left(\frac{r}{x}\right) + r$$

$$y = f\left(\frac{r}{x}\right)$$

$$f(x) \xrightarrow{\text{eigen}} f(rx-1)$$



$$p(x) = |x-a| - r$$

$$\frac{ar + F - Ka}{(a-r)(a-r)} = \frac{1}{r}$$

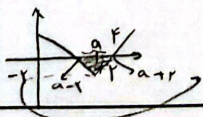
$$ar + F - Ka = 1$$

$$a - r(a-r)$$

$$\frac{a - r(a-r)}{r} + \frac{F - (-r)}{r} = \frac{q}{r}$$

$$ar - Fa + c =$$

$$(a-1)(a-r) =$$



$$|a-a| - r = -r$$

$$f\left(\frac{1}{r}\right) = \left| \frac{1}{r} - a \right| - r$$