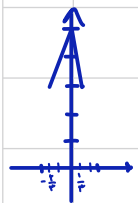


$$D_{f(x)} = [-r, r] \quad -r \leq \frac{rx+r}{a} \leq r \rightarrow \frac{-a-r}{r} \leq x \leq \frac{r-a-r}{r} \rightarrow -r \leq x \leq r$$

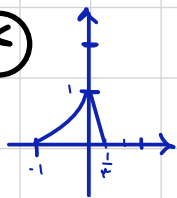
$$D_{f(x-r)} = [-r, r] \quad r(-r)-r \leq x \leq r(r)-r \rightarrow -a \leq x \leq a$$

$$D_{f(\frac{x-r}{r})} = [-r, r] \quad \frac{-r+1}{r} \leq x < \frac{a+1}{r} \rightarrow -1 \leq x < a \rightarrow -1 \leq r-ax < a \rightarrow -\frac{r}{a} < x \leq \frac{r}{a}$$



$$-1 \leq rx+1 \leq r \rightarrow \frac{-r}{r} \leq x \leq \frac{r-1}{r}$$

(K)



$$1 \leq r-rx \leq a \rightarrow -1 \leq x \leq \frac{1}{r}$$

(a)

$$a(x-x_0)^r + y_0 = y \rightarrow -\frac{1}{r}(x-r)^r + r = y \rightarrow -\frac{1}{r}x^r + \frac{a}{r}x - \frac{1}{r} = 0 \quad \begin{cases} x_1 = v \\ x_2 = 1 \end{cases}$$

$$rx+r=1 \rightarrow x = -\frac{1}{r} \quad r(-r)+1 = -1 \quad \alpha\beta = (-1)(-\frac{1}{r}) = \frac{1}{r}$$

$$D_{f(x-1)} = (a+1, a] \quad D_{g(x)} = [-r, b-1) \quad a+1 = -r \rightarrow a = -r \quad b-1 = a \rightarrow b = 0 \quad a-b = -r-0 = -r$$

$$-\frac{r}{r}+1 \leq x \leq \frac{a}{r}+1 \rightarrow -1 \leq x \leq \frac{1}{r} \quad [-1, r] \xrightarrow{x \mapsto r-x} [-a, 1] \xrightarrow{\text{تبدیل}} [0, a] \xrightarrow{\text{تبدیل}} [0, \sqrt{a}]$$

$$\left| \frac{(x-r)+1}{r(x-r)+1} \right| + 1 = \left| \frac{x-1}{rx-r} \right| + 1 \xrightarrow{x+y(x) < 0} x+1 + \left| \frac{x-1}{rx-r} \right| < 0 \rightarrow \left| \frac{x-1}{rx-r} \right| < -x-1 \xrightarrow{x < -1} \frac{x-1}{rx-r} < -x-1 \rightarrow \frac{x-1+(x+1)(rx-r)}{rx-r} < 0 \rightarrow \frac{r(x^2-r)}{rx-r} < 0 \xrightarrow{x < -1} (-\infty, -\sqrt{r})$$

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