

چاقم نامه باز رفت مثالین!

$g(n) = n$   $f(n) = n^2$   $n \geq 0$   $\Rightarrow f(n) = g(n) \Rightarrow [0, \infty)$   $n$  دقت برابر باشند

(ج.)  $\frac{\sin^n x - \sqrt{\sin x}}{\sin x} \rightarrow$  صورت  $\left\{ \begin{array}{l} \text{بالا رهن ساده} \\ \text{پایین رهن خارج} \end{array} \right.$  

$\frac{\sin^n x (\sin^n x - 1)}{\sin^n x - 1} = \sin^n x$   $Df = Dg$  ✓

2)  $f(x) = \frac{x}{|x|}$   $g(x) = \frac{|x|}{x}$   $f(x) = g(x)$   $f = g$   $\rightarrow$  همزلف

$\frac{x}{|x|} = 1 \left\{ \begin{array}{l} x > 0 \\ |x| = x \end{array} \right.$   $\frac{|x|}{x} = -1 \left\{ \begin{array}{l} x < 0 \\ |x| = -x \end{array} \right.$

$f = g$   $\left\{ \begin{array}{l} 1 \text{ n.s.} \\ -1 \text{ n.c.} \end{array} \right.$   $x = 0$  تعریف نشده اند

2.)  $x - |x| > 0$   
 $x > |x|$   
 $|x| - x > 0$   
 $x < |x|$

$$[1_{\text{cell}}] = \frac{1}{2} \cdot 1 = \frac{1}{2}$$

$n^p - n \leftarrow$   
 $\Rightarrow n(n^{p-1} - 1) = n(n-1)(n+1)$   
 $f = g \quad n-1 \neq 0 \quad n \neq 1$   
 $\checkmark \quad \frac{n(n-1)(n+1)}{n-1}$   
 $f(n) = n(n+1) = n^2 + n$

$$f(n) + g(n) = n^7 + n + 1$$

$$f(n) - g(n) = n^2 - n + 1$$

$$f(n) \in n^r + 1 \quad g(n) \in n$$

$$\varphi^T(n) - g^T(n) = n^2 + n + 1$$

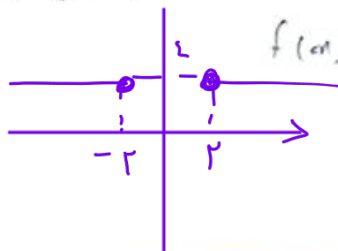
$$\sqrt{n+1} \rightarrow n+1 \geq 0 \rightarrow n \geq -1$$

$$f(n) : g(n)$$

$$f_{X,Y} = n^2 - (n^2 - 2) = 2$$

$\circ f \times g: n \geq r \leq n \leq -r$

$$f(n) = g(n) + f(n) - n + 1 \Rightarrow 0 = f(n)$$



$$f(x) = x \cdot \sqrt{x+1} \rightarrow x \geq -1$$

$D_f = [-1, +\infty)$   $D_f = x \geq -1$

~~$$f(x) = \sqrt{x} - x^4$$
$$x \geq 0 \rightarrow [0, +\infty)$$~~

~~$$g(n) = \sqrt{n} - (\sqrt{n} - n^4) = \sqrt{n} - \sqrt{n} + n^4 = n^4$$~~

$$g(\eta) = \eta = [0, +\infty)$$

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

$$\frac{n-b}{r(n^2 - \frac{r}{r}n - \frac{b}{r})} = \frac{an+b}{n^2 - \frac{r}{r}n + n}$$

$$\forall a, n+1 \geq n-b \rightarrow a \leq \frac{1}{f}$$

$$b \leq -2$$

$$am - bn \leq \frac{uv}{l}$$

$$f(x) = \frac{bx+c}{ax+b} \quad \begin{matrix} ac \geq b \\ bc < r \end{matrix} \rightarrow ac \geq r \rightarrow c \geq \frac{1}{r}$$

$$ax+b=0 \quad x = -\frac{b}{a}$$

$$D = R - \{-\frac{b}{a}\} \quad c < \frac{1}{r} \rightarrow a < -\frac{1}{r} \rightarrow b < \varepsilon$$

$$-\frac{b}{a} \cdot a = -b \cdot a^r \rightarrow ab = -a^r \quad a \neq 0 \quad c < -\frac{1}{r} \rightarrow a < \frac{1}{r} \rightarrow b < -\varepsilon$$

$$\frac{ab}{c} = -\frac{a^r}{c} \quad Df: R \rightarrow \frac{a}{b} \text{ دالة}$$

$$\frac{ab}{c} \geq \pm \varepsilon$$

$$f = \{(x, -1), (y, r), (-a, r), (0, 0)\}$$

$$x = r$$

$$f(r) = -1, g(r) = \frac{rg}{g+r} = \left\{ (-1, \varepsilon), (r, 1), (r, \frac{1}{r}) \right\} \quad r = \frac{1}{r}$$

$$b(x) = \frac{rg(x)}{f(x)+g(x)}$$

$$b(r) = \frac{1}{r}$$

$$x = r \quad f(r) \rightarrow \text{مقدار}$$

$$x = -1 \quad \text{تقریب فیه} \quad f(a) \text{ دای} \quad g(-1) = -1$$

$$x = a \quad \text{تقریب} \quad f(a) \quad g(a) = 0$$

$$a = d : (d, r), (a, r)$$

$$a = d = -1$$

$$a = -1 \quad g(-1, r) \quad f(a, r) \quad ra - rb = 1 \rightarrow -rb = \varepsilon \rightarrow b < -r$$

$$c = a - vb \rightarrow g(a - vb, a) \quad f(c, a) \quad a - rb < c \rightarrow -1 - (-4) < \delta \rightarrow c < \delta$$

$$g(r, -1) \quad f(r, r - vb) = -1$$

$$c + d = \varepsilon$$

$$ra - vb = 1$$

$$-r - vb = 1 \rightarrow -vb = r$$

$$b = -\frac{r}{v}$$

$$c = -1(r - \frac{r}{v}) = -1 + r = r$$

$$c = r$$

$$c + d = r + (-1) = r - 1 = 1$$

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

$$g(x) = \{(a, b)\}$$

$$-r + x - m \geq 0 \Rightarrow -(x^2 - x + m) \geq 0$$

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

$$\rightarrow a = \frac{1}{r}$$

$$f = g$$

$$-x^2 + x - m = 0$$

$$a^2 - a + m = 0 \quad b = 0 \quad \Delta < 0 \rightarrow m < \frac{1}{\varepsilon}$$

$$a + b \rightarrow b = 0 \Rightarrow a + b = 0$$

$$\hookrightarrow b = 0$$

$$\frac{mx+r}{x^2+x+b} = \frac{r}{x-c}$$



$$\Delta < 0 \rightarrow b < 9$$

$$Df \cap g \rightarrow c = -r$$

$$x + 4 = x + a$$

$$a < 4$$

$$(mx+r)(x-c) = r(x^2+x+b)$$

$$mx^2 - m(x + r) - r = rx^2 + rx + rb$$

$$a = r \quad -m(x + r) = r \quad x \text{ مبر}$$

$$-rc + r = r \rightarrow -rc = 0 \quad c = 0$$

$$-rc = rb \rightarrow 0 = rb \rightarrow b = 0$$

$$\begin{cases} a = r \\ b = 0 \\ c = 0 \end{cases} \quad r + 0 + 0 = r$$

$$a + b + c = r$$