

$$y = -\frac{1}{r}x^r + \frac{r}{a}x + 1 \quad \text{at } \frac{-\frac{1}{r}x^r}{\frac{r}{a}} = \frac{-\frac{1}{r}x^r}{\frac{r}{a}} = \frac{r}{a}$$

$$b(n-1)^r + r = g(n) \quad -\frac{1}{r}(n-1)^r + r = -\frac{1}{r}(n^r - rn + 1) + r = -\frac{n^r}{r} + n + \frac{r-1}{r}$$

$$\frac{1}{a}(-an^r + rn + 1a) \quad + \frac{1 \pm \sqrt{4r-2n}}{r} = \frac{n \pm \sqrt{r}}{r} \quad \frac{1}{r}(n-r)(n-1) \quad \frac{1}{r}(n-1) + r$$

$$a(n-r)^r + 1/r = \frac{1}{r}(n-r)^r + 1/r \quad \frac{1}{r}(n-1) + r \quad \checkmark$$

$$y = 1 - 2r(rn+r) \quad \alpha B \rightarrow \frac{1}{r}x - r = \frac{r}{r} \checkmark$$

$$f(n) \rightarrow K(n-1)^r + r \xrightarrow{n=1 \rightarrow f(n)=0} K+1 \rightarrow K=-1$$

$$f(rn+r) \rightarrow -(rn+r)^r + r(rn+r) + r \rightarrow -(9n^r + 12n) + 9n + r + r \rightarrow -9n^r + 12n + 2r$$

$$y = 1 - 2(-9n^r - 12n + 2r) \rightarrow 1 + 18n^r + 24n - 4r \rightarrow 18n^r + 24n - 4r$$

$$y = r - \sqrt{2n} \xrightarrow{\ominus \text{C} \text{B} \text{D} \text{M}} r - \sqrt{r(r+1)} \xrightarrow{\text{C} \text{B} \text{D} \text{M}} r - \sqrt{-rn+r} \xrightarrow{y+r} r - \sqrt{-rn+r} + r$$

$$y = r + \sqrt{-rn+r} = \frac{r}{r}$$

$$r - \sqrt{-rn+r} + r = \frac{r}{r} = -\sqrt{-rn+r} + 2r \rightarrow V = -\sqrt{-rn+r} + 2r$$

$$\Rightarrow \frac{11}{r} = -rn+r \rightarrow \frac{11-r}{r} = -rn \rightarrow \frac{11-r}{r} = -rn \rightarrow \frac{11-r}{r} = -rn$$

$$y = f(n-1) + g(n+1) \quad D_g = [-1, b) \quad D_f = (a, 2]$$

$$a < x \leq c \quad -1 \leq n < b$$

$$a-1 < n-1 \leq c \quad a-1 < n-1 \leq c \rightarrow a-1 < n-1 \leq c \rightarrow a-1 < n-1 \leq c$$

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$$n=0 \rightarrow f\left(\frac{n}{r}+1\right) = f\left(\frac{0}{r}+1\right)$$

$$n=-r \rightarrow f\left(\frac{n}{r}+1\right) = f\left(\frac{-r}{r}+1\right)$$

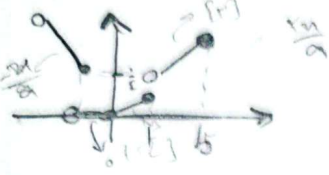
$$g(n) = \sqrt{|rf(n)-r|} \Rightarrow D_g = D_f = \left[\frac{1}{r}, \frac{r}{r}\right]$$

$$-1 < y_1 < r \quad -2 < ry_1 < 2 \rightarrow -2 < ry_1 < 2$$

$$\rightarrow 0 \leq |ry_1 - r| < 2 \rightarrow 0 \leq |ry_1 - r| < 2$$

$$R_g = [0, \sqrt{2}]$$

$$y = \frac{n}{a} [an]$$



$$0 < an < 1 \rightarrow 0 \leq n < \frac{1}{a} \text{ جزء}$$

$$[an] = 0 \rightarrow \frac{1}{a} < n \leq 0 \rightarrow [an] = 0$$

$$y = 0$$

$$1 < an < 2 \rightarrow \frac{1}{a} < n \leq \frac{2}{a} \rightarrow d = \frac{n}{a} \rightarrow a < 0$$

$$[an] = 1$$

$$A\left(\frac{1}{a}, \frac{1}{2}\right) \rightarrow \frac{1}{a} = \frac{1}{2}$$

(y)

$$an = 2 \rightarrow a = \pm 2 \rightarrow a = -2$$

$$(a < 0)$$

$$y = \frac{n}{-2} [-2n] \rightarrow b = 1 \times \frac{1}{-2} = -\frac{1}{2}$$

$$b - a = 1 + \frac{1}{2} = \frac{3}{2}$$

$$f(n) = \log_p n \xrightarrow{\text{change of base}} \log_r n + r$$

$$\log_r n + r$$

$$\xrightarrow{\text{change of base}} -\log_r n + r$$

$$\xrightarrow{+3} -\log_r n + r + 3$$

$$\xrightarrow{\text{change of base}} -\log_r n + r + 3 = dg(n)$$

$$g(-12) = -\log_r n + r + 3$$

$$\rightarrow -2 + 3 = 1$$

$$g(-41) = -\log_r n + r + 3 \rightarrow -4 + 3 = -1$$

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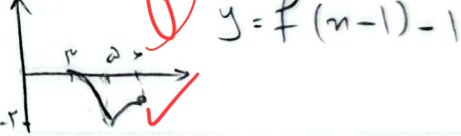
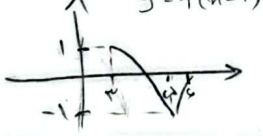
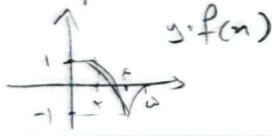
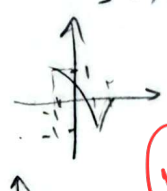
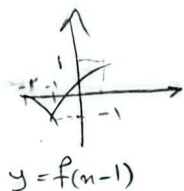
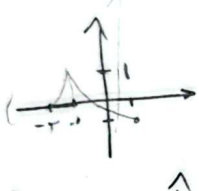
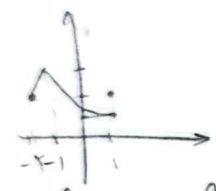
$$-2 + (-1) = -3$$

$$y = f(r-n)$$

$$y = -f(r-n)$$

$$y = f(r-n)$$

$$y = f(n+r)$$



$$f(n) = \left| \frac{n+1}{r(n+1)} \right|$$

$$\xrightarrow{\text{change of base}} \left| \frac{n-1}{r(n-1)+1} \right|$$

$$\xrightarrow{\text{change of base}} \left| \frac{n-1}{r(n-1)} \right| + 1$$

$$\rightarrow n \in (-\infty, -\sqrt{r})$$

$$n + \left| \frac{n-1}{r(n-1)} \right| + 1 < 0 \rightarrow \left| \frac{n-1}{r(n-1)} \right| < -(n+1)$$

$$\rightarrow \frac{n-1}{r(n-1)} < -(n+1) \rightarrow \frac{n-1}{r(n-1)} < 0$$

$$\frac{n-1}{r(n-1)} > n+1 \rightarrow \frac{-r(n^2-n-1)}{r(n-1)} > 0$$

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9

$$y = n^r$$

$$g(n) = \sqrt{r(n f(n) - f(n))}$$

$$\text{سری مشتق} \quad \frac{-1}{-1+1} = \frac{r}{-1+1}$$

(1)

$$f(n) = (n-1)^r + r \rightarrow \text{جواب (مشتق)}$$

$$g(n) = \sqrt{r(n f(n) - f(n))} \rightarrow g(n) = \sqrt{-f(n)(f(n)-n)}$$

$$\downarrow$$

$$f(n) = r \rightarrow n = r$$

$$f(n) = \frac{r}{n} (n-1)^r + r$$

$$\rightarrow \text{مشتق} = \left[\frac{r}{n}, \frac{1}{n} \right] \rightarrow \text{مشتق}$$