

SUBJECT:

DATA:

NUMBER:

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میدان خطی

$$y = -\frac{1}{r}(x - x_0) + y_0 \xrightarrow{(x, y)} y = -\frac{1}{r}(x - x_0) + r \quad (1)$$

$$5 \quad y = 0 \rightarrow -\frac{1}{r}(x - x_0) + r = 0 \rightarrow (x - x_0)^2 = 9 \rightarrow x - x_0 = \pm 3 \quad \left. \begin{array}{l} x - x_0 = 3 \\ x - x_0 = -3 \end{array} \right\} \begin{array}{l} x = 4 \\ x = 1 \end{array} \quad \checkmark$$

$$f \text{ given by } \rightarrow (1, 2) \xrightarrow{f(x+2)} (-1, 2) \xrightarrow{f(x+2)} \left(-\frac{1}{r}, 2\right) \quad (2)$$

$$\xrightarrow{-2f(x+2)} \left(-\frac{1}{r}, -1\right) \xrightarrow{1-2f(x+2)} \left(-\frac{1}{r}, -v\right) \quad \alpha \beta = \frac{v}{r} \quad \checkmark$$

$$10 \quad (3)$$

$$y = 3 - \sqrt{2x} \xrightarrow{\text{میدان خطی}} y = 3 - \sqrt{2x+2} \xrightarrow{\text{قرینه نسبت به}} -3 + \sqrt{2x+2}$$

$$y \xrightarrow{\text{میدان خطی}} \sqrt{2x+2} + 2 \xrightarrow{\text{نقطه برخورد}} \sqrt{2x+2} + 2 = \frac{v}{r}$$

$$\rightarrow \sqrt{2x+2} = \frac{v}{r} \xrightarrow{\text{مربع}} 2x+2 = \frac{9}{r} \rightarrow \boxed{x = \frac{1}{r}} \quad \checkmark$$

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$$f(x) \rightarrow x \{ \dots \} \rightarrow -3 \{ \dots \} \rightarrow a = -3 \quad (4)$$

$$g(x) \rightarrow x \{ \dots \} \rightarrow 1 \{ \dots \} \rightarrow b = 4 \quad \left. \begin{array}{l} a = -3 \\ b = 4 \end{array} \right\} a \cdot b = -12 \quad \checkmark$$

$$20 \quad \sqrt{1-2f(x)-x} \rightarrow \text{تفاضل مشتقات} \rightarrow D_y = D_{f(x)} \quad (5)$$

$$y_1 = f\left(\frac{m}{r} + 1\right) \rightarrow D_y = [-r, 0] \xrightarrow{Df} -\frac{r}{2} < \frac{m}{r} < \frac{0}{r} \rightarrow -\frac{1}{r} < \frac{m}{r} + 1 < \frac{v}{r}$$

$$\rightarrow Df = \left[-\frac{1}{r}, \frac{v}{r}\right] \rightarrow Dy_1 = \left[-\frac{1}{r}, \frac{v}{r}\right] \quad \checkmark$$

$$25 \quad \rightarrow \{x, y - 3\} \rightarrow R_f = [1, \sqrt{5}]$$

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$R_f = [0, \sqrt{5}]$

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$$y = \frac{m}{a} [am] \rightarrow 0 < am < 1 \xrightarrow{y=0} \frac{1}{a} < m < 0 \quad a < 0 \quad (4)$$

$$1 < am < 2 \rightarrow \frac{1}{a} < m < \frac{1}{a} \quad y = \frac{m}{a} \quad [am] = 1 \quad (2)$$

$$5 \quad y = \frac{m}{-r} [-rm] \quad b = 2 \times \frac{1}{r} = 1 \quad A(\frac{1}{a}, \frac{1}{r}) \rightarrow a = r \rightarrow a = -r$$

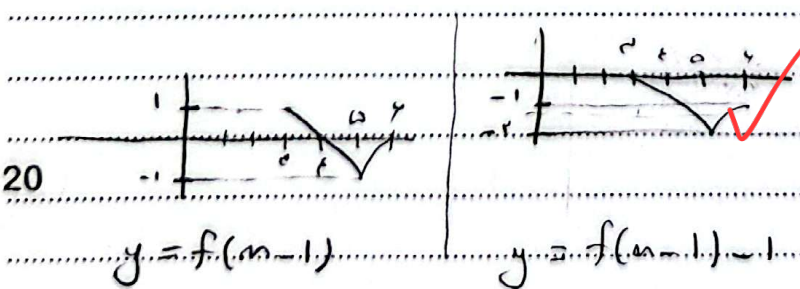
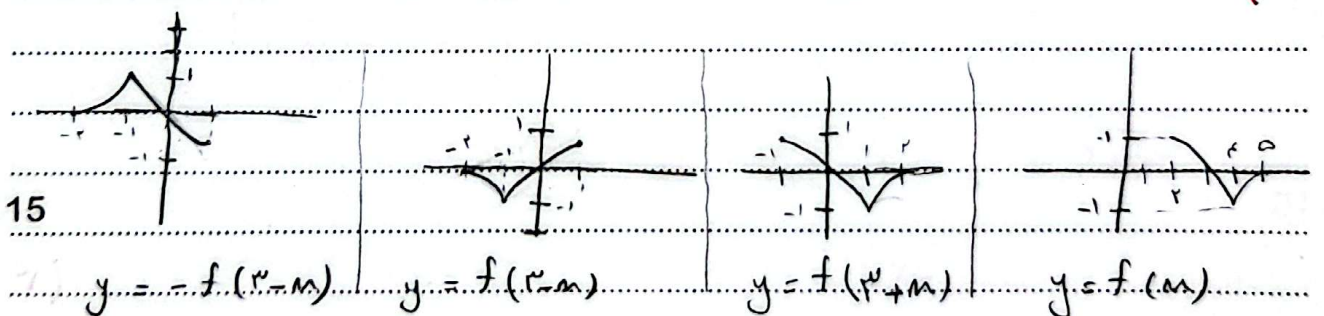
تغییر دهنده $= \frac{1}{r}$

$$b - a = r \quad \checkmark$$

$$f = \log_r \frac{m}{r} \xrightarrow{\text{تغییر دهنده}} y = \log_r \frac{m+r}{r} \xrightarrow{\text{تغییر دهنده}} y = -\log_r \frac{m+r}{r} \quad (v)$$

$$\forall b, m, r \quad y = r - \log_r \frac{m+r}{r} \xrightarrow{\text{تغییر دهنده}} g = r - \log_r \frac{-m+r}{r}$$

$$10 \quad g(-1r) = r - \log_r \frac{1r}{r} = r - 1 = -1 \quad g(-4r) = r - \log_r \frac{4r}{r} = r - 4 = -4 \quad \begin{cases} -1 - r = -4 \\ -1 - r = -4 \end{cases} \quad (2)$$



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سوال ۱۰، ۱۱، ۱۲ $f = \left| \frac{n-1}{r_n - r} \right| \xrightarrow{r=1, n=1} \left| \frac{2-1}{r_n - r} \right| + 1$ (9)

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

5 (1) $\frac{n-1}{r_n - r} < -(n+1) \rightarrow \frac{r_n^2 - r}{r_n - r} < 0 \rightarrow \frac{-\sqrt{r}}{e} + \frac{\sqrt{r}}{e} + \frac{r}{e}$

(2) $\frac{n-1}{r_n - r} > n+1 \rightarrow \frac{-r(n^2 - n - 1)}{r_n - r} \xrightarrow{\frac{1-\sqrt{a}}{r} \cdot \frac{r}{r} + \frac{1+\sqrt{a}}{r}} \frac{1-\sqrt{a}}{e} - \frac{r}{e} + \frac{1+\sqrt{a}}{e}$ (5)

(1) $\cap$ (2) $\rightarrow n \in (-\infty, -\sqrt{r})$ ✓

10 $f(n) = (n-r)^r + rV$ $g(n) = \sqrt{f(n)(f(n) - rA)}$ (10)
 سوال ۱۰ $\downarrow$ $\downarrow$ $f(n) = rA$

$f(n) = 0 \rightarrow (n-r)^r + rV = 0 \rightarrow (n-r)^r = -rV \rightarrow n-r = -r \rightarrow n = -1$

$f(n) = rA \rightarrow (n-r)^r + rV = rA \rightarrow (n-r)^r = 1 \rightarrow n-r = 1 \rightarrow n = r$

15 سوال ۱۵ $\Rightarrow \frac{-1}{-1+1-} \xrightarrow{r} Dg = [-1, r] \rightarrow \underbrace{-1, 0, 1, 2, r}_{\text{م. ا.}}$

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

20 $D_f = \left[0, \frac{1}{r} \right] \rightarrow \text{max} \text{ در } r$

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