

۱۵،۵

نام و نام خانوادگی: ... شماره تکلیف: ... کلاس: ...

$$A \times B = B^T = \{(1, -2)(1, -4)(2, -2)(2, -4)(2, -2)(3, -2)\}$$

$$A \times B = \{(1, 2)(1, 3)(2, 2)(2, 3)(3, 2)(3, 3)\} \quad \textcircled{5}$$

$$B \times B = \{(2, 2)(2, 3)(3, 2)(3, 3)\} \text{ خطی } \{(1, 2)(1, 3)\}$$

برای ضرب کسری باید دامنه اولی رود برد دوم ضرب کنی.

$$\begin{aligned} (m^2, m+2) & \Rightarrow m^2 = m+2 \\ \Rightarrow m^2 - m - 2 & = 0 \Rightarrow (m-2)(m+1) = 0 \\ \Rightarrow m & = 2, -1 \end{aligned}$$

$$\begin{aligned} m = 2 & \Rightarrow (2, 1) \text{ و } (2, 4) \times \\ m = -1 & \Rightarrow (-1, 2) \text{ و } (-1, 4) \times \end{aligned}$$

فصلی مقدار برای m صفر نمی گذرد.

$$\begin{aligned} (m^2, m+2) & \Rightarrow m^2 = m+2 \\ \Rightarrow m^2 - m - 2 & = 0 \Rightarrow (m-2)(m+1) = 0 \\ \Rightarrow m & = 2, -1 \end{aligned}$$

عقده $(2, 1)(2, 4)$

$$\text{خطی } (1, 2)(1, 3)$$

①

$$n=1 \Rightarrow n^2-1=a \Rightarrow 1-1=a \Rightarrow a=0$$

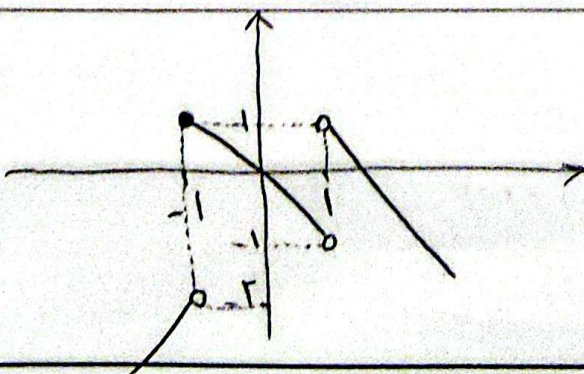
$$n=2 \Rightarrow a \Rightarrow 2a-1=1 \Rightarrow 2a=2 \Rightarrow a=1 \Rightarrow b=-1$$

$$a \times b = 1 \times (-1) = -1$$

②

$$n=k \Rightarrow 2n-2=2k-2 \Rightarrow 2k-2=2k-2 \Rightarrow k=1 \Rightarrow k=\frac{1}{2}=1/2$$

③



$$D_f = \mathbb{R} - \{1\}$$

$$R_f = (-\infty, 1]$$

④

$$\Rightarrow \begin{cases} y_1^r = -n^r - 1 \\ y_2^r = -n^r - 1 \end{cases} \Rightarrow y_1^r = y_2^r \Rightarrow y_1 = y_2 \quad \text{الف}$$

تابع است ✓ (2)

$$\Rightarrow y^r - 12y + 9 + n^r - 2n + 1 = 0 \Rightarrow (y-4)^r + (n-1)^r = 0 \Rightarrow \begin{cases} n=1 \\ y=4 \end{cases}$$

تابع است ✓

$$n \sin y - y \sin n = 0 \Rightarrow n \sin y_1 - y_1 \sin n = n \sin y_2 - y_2 \sin n \Rightarrow y_1 = y_2 \Rightarrow y_1 = y_2$$

تابع است ✓ (1,75)

$$\Rightarrow \frac{n}{y} + \frac{y}{n} + 2\sqrt{\frac{ny}{n}} = \frac{n}{y} + \frac{y}{n} + 2 = 4 \Rightarrow \frac{n}{y} + \frac{y}{n} = 2 = \frac{n^r + y^r}{ny}$$

$$\Rightarrow n^r + y^r = 2ny \Rightarrow n^r - 2ny + y^r = (n-y)^r = 0 \Rightarrow n=y \quad \text{تابع است ✓}$$

$$\frac{n-1}{n-4} \geq 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

$$\frac{2-n}{n} \geq 0 \Rightarrow \frac{2}{n} \geq 1 \Rightarrow n \leq 2$$

الف (1,10)

(1) $n \in [1, 2]$ (2) $n \in (4, +\infty)$ $\Rightarrow n \in [1, 2] \cup (4, +\infty) = D$

$$\sqrt{y-1} = \sqrt{4} - \sqrt{n} \Rightarrow \sqrt{y-1} \geq 0 \Rightarrow \sqrt{4} - \sqrt{n} \geq 0 \Rightarrow \sqrt{n} \leq \sqrt{4} \Rightarrow n \leq 4$$

(1) $n \in [0, 4]$ (2) $n \in [0, 4]$ $\Rightarrow D = [0, 4]$ ✓

(1,5)

$$n^r - \sqrt{n+4} \geq 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

$$n^r - 1 \cdot n + 4 > 0 \Rightarrow (n-1)(n-1) > 0 \Rightarrow \frac{1}{n-1} \geq 0 \Rightarrow n > 1$$

الف (1,10)

$\Rightarrow D = (-\infty, 1] \cup (4, +\infty)$ $\Rightarrow n < \frac{14}{9}$ $D = (-\infty, 1]$

$$\frac{n^r - \sqrt{n+4}}{n^r - 1 \cdot n + 4} \geq 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

(1,25)

$\Rightarrow D = (-\infty, 1] \cup (4, +\infty) \cup (1, 4]$ ✓

$$2n^r - 2n + 4 \geq 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

$$2n^r - \sqrt{n+4} > 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

الف (2)

$\Rightarrow D = (-\infty, 1) \cup [\frac{4}{3}, +\infty)$ ✓

$$\frac{2n^r - 2n + 4}{2n^r - \sqrt{n+4}} \geq 0 \Rightarrow \frac{1}{n-4} \geq 0 \Rightarrow n > 4$$

(1)

$\Rightarrow D = (-\infty, 1) \cup (1, \frac{4}{3}) \cup [\frac{4}{3}, +\infty)$ ✓