

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

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$$\begin{aligned} (x, m^2) \cap (x, m+2) &\Rightarrow m^2 = m+2 \quad (1) \\ \Rightarrow m^2 - m - 2 = 0 &\Rightarrow (m-2)(m+1) = 0 \\ \Rightarrow m = 2, -1 \\ m = 2 &\Rightarrow (2, 1) \cap (2, 4) \rightarrow (2, 1) \cap (2, 4) \times \\ m = -1 &\Rightarrow (-1, 1) \cap (-1, 4) \rightarrow (-1, 1) \cap (-1, 4) \times \end{aligned}$$

فصل چهارم: برای m صحیح گزین.

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

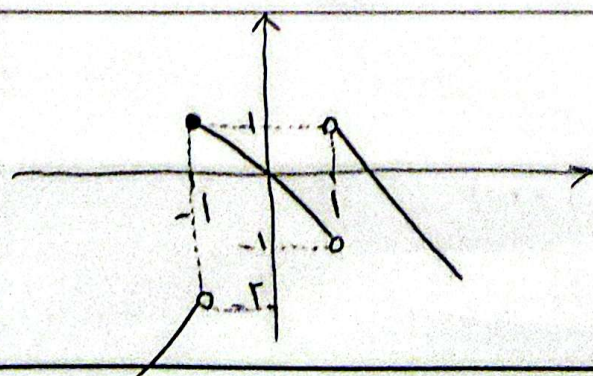
$$n=2 \Rightarrow a \cap b = n^2 \Rightarrow 2a+b=1 \Rightarrow 2a-a=1 \Rightarrow a=1 \Rightarrow b=-1$$

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

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$$n=k \Rightarrow 2n-2=2-k \Rightarrow 2k-2=2-k \Rightarrow 3k=4 \Rightarrow k=\frac{4}{3}$$

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

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

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

تابع است

$$\Rightarrow r y_1^r - 1 r y_1 + 9 + n^r - 2 n + 1 = 0 \Rightarrow (r y_1 - 1)^r + (n-1)^r = 0 \Rightarrow \begin{cases} n=1 \\ y=\frac{r}{r} \end{cases}$$

تابع است

$$n \sin y - y \sin n = 0 \Rightarrow n \sin y_1 - y_1 \sin n = n \sin y_r - y_r \sin n \Rightarrow y_1 = y_r = y \quad \text{الف}$$

تابع است

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

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

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

$$\frac{r-n}{n} \geq 0 \Rightarrow \frac{r}{n} \geq 1 \Rightarrow r \geq n$$

الف

$n \in [1, r) \quad \text{ع}$ $n \in \mathbb{R} \setminus (0, r] \Rightarrow n \in [1, r] = D$

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

الف

$n \geq 0 \quad \text{ع} \Rightarrow D = [0, r]$

$$n^r - \sqrt{n+4} \geq 0 \Rightarrow \frac{1}{r} \geq \frac{1}{\sqrt{n+4}} \Rightarrow n \in (-\infty, 1] \cup [4, +\infty)$$

$$n^r - 1 \cdot n + 4 > 0 \Rightarrow (n-1)(n-1) > 0 \Rightarrow \frac{1}{r} > \frac{1}{n-1} \Rightarrow n \in (-\infty, 1) \cup (1, +\infty)$$

الف

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

$$\frac{n^r - \sqrt{n+4}}{n^r - 1 \cdot n + 4} \geq 0 \Rightarrow \frac{1}{r} \geq \frac{1}{\sqrt{n+4}} \Rightarrow n \in (-\infty, 1] \cup [4, +\infty)$$

الف

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

$$r n^r - 2 n + 4 \geq 0 \Rightarrow \frac{1}{r} \geq \frac{2}{n} \Rightarrow n \in (-\infty, 1] \cup [\frac{r}{2}, +\infty)$$

$$r n^r - \sqrt{n+4} > 0 \Rightarrow \frac{1}{r} > \frac{1}{\sqrt{n+4}} \Rightarrow n \in (-\infty, 1) \cup (\frac{r}{2}, +\infty)$$

الف

$\Rightarrow D = (-\infty, 1) \cup [\frac{r}{2}, +\infty)$

$$\frac{r n^r - 2 n + 4}{r n^r - \sqrt{n+4}} \geq 0 \Rightarrow \frac{1}{r} \geq \frac{2}{n} \Rightarrow n \in (-\infty, 1] \cup [\frac{r}{2}, +\infty)$$

الف

$\Rightarrow D = (-\infty, 1) \cup (1, \frac{r}{2}) \cup [\frac{r}{2}, +\infty)$