

یازدهم دختر C فرزند آقای تکلیف شما، 1

(14, 20)

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

(2)

1

$$A \times B = \{(1, 2), (1, 3), (2, 2), (2, 3), (3, 2), (3, 3)\} \quad B^P = \{(2, 2), (2, 3), (3, 2), (3, 3)\}$$

$$m^P = m + 2 \rightarrow m^P - m - 2 = 0 \rightarrow (m - 2)(m + 1) = 0 \rightarrow m = 2 \text{ or } m = -1$$

الف $m = -1$

2

$$m = 2 \rightarrow (3, 4), (2, 1), (3, 2), (-2, 2), (3, 4), (2, 4) \quad \times$$

$$m = -1 \rightarrow (3, 1), (2, 1), (-3, -1), (-2, -1), (3, 1), (-1, 4) \quad \checkmark$$

$$m^P = m + 2 \rightarrow m = 2 \rightarrow (3, 4), (2, 1), (2, 4), (3, 4), (-2, 2), (-1, 3) \quad \times$$

ب هیچ مقداری برای m امکان پذیر نیست

$$m = -1 \rightarrow (3, 1), (2, 1), (-1, 4), (3, 1), (-2, -1), (-1, 3) \quad \times$$

$$x = 1 \rightarrow x^P - 1 = ax + b \rightarrow 0 = a + b \quad \textcircled{1}$$

$$ax + b = -9x$$

3

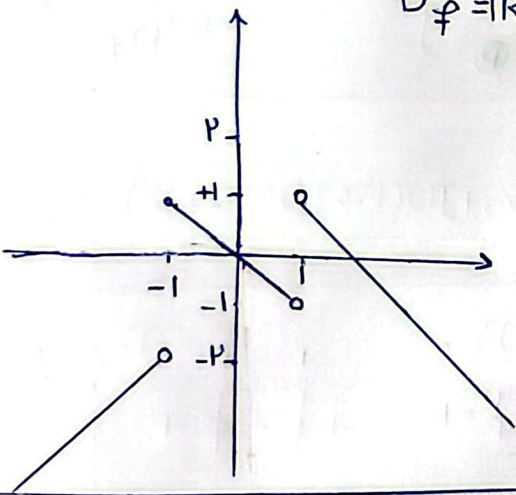
$$x = 2 \rightarrow 1 = 2a + b \quad \textcircled{2} \rightarrow a = 1 \rightarrow b = -1$$

$$x = k \rightarrow 2x - 3 = k - 3x \rightarrow 2k - 3 = k - 3k \rightarrow 2k = 4 \rightarrow k = 2$$

4

$$D_f = \mathbb{R} - \{1\} \quad R_f = (-\infty, 1]$$

5



(2)

$$x^P y^P + x^P + 1 = 0 \rightarrow y^P = -x^P - 1 \xrightarrow{x_1 = x_2} y_1^P = y_2^P \rightarrow y_1 = y_2 \quad \checkmark$$

6

$$x^P + 4y^P - 2x - 12y + 1 = 0 \rightarrow \underbrace{4y^P - 12y + 9}_{(2y-3)^2} + \underbrace{x^P - 2x + 1}_{(x-1)^2} = 0 \rightarrow (2y-3)^2 + (x-1)^2 = 0$$

یک نقطه تابع هست $x = 1, y = \frac{3}{2}$

الف) $\sin y = y \sin x \rightarrow x=0 \rightarrow \sin y = 0 \cdot y \rightarrow$ y مقدار بی نهایت باشد پس تابع مشتق است ✓

→ لازم دعا را می تواند
جامعه بین تابع بنویسد ✓

X

7

7) $\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = 2 \rightarrow x, y$ فقط وقتی $x=y$ نابع درست ✓
برابر باشند تا بتوان
افت $1+1=2$

الف) $y = \sqrt{\frac{x-1}{x-2}} + \sqrt{\frac{2-x}{x}}$ $\rightarrow$ ① $x \neq 1$ ② $x \neq 2$ ③ $\frac{x-1}{x-2} \geq 0 \rightarrow \frac{1}{+} \frac{-}{-} \frac{2}{+}$




$$\frac{p-x}{x} \geq 0 \rightarrow \frac{p}{-x+p}$$



① ④ ⑤ ⑥ ⑦ → (0, 1] = Df

$$\text{b.) } \sqrt{x} + \sqrt{y-1} = \sqrt{15} \rightarrow -\sqrt{x} + \sqrt{15} = \sqrt{y-1} \xrightarrow{(\quad)^2} (+\sqrt{15} - \sqrt{x})^2 = y-1 \rightarrow$$

$$\mu + x - \sqrt{\mu x + 1} = y \rightarrow \mu x \gg \cdot \rightarrow x \gg \cdot \quad D_f = [., +\infty)$$

$$\sqrt{y-1} = \sqrt{\kappa} - \sqrt{u} \quad \sqrt{\kappa} - \sqrt{u} y. \quad u \leq \kappa \quad D_f = [., \kappa]$$

الف) $x^2 - 7x + 9 > 0 \rightarrow (x-9)(x-1) > 0 \rightarrow$  ①
 $x - 1 \cdot x + 19 > 0 \rightarrow$
 $-9x + 19 > 0 \rightarrow -9x > -19 \rightarrow x < \frac{19}{9}$

$\{ \textcircled{1} \cap \textcircled{2} \rightarrow \text{Def. for } \textcircled{1} \}$

$\vdash) \frac{(x-4)(x-1)}{(x-1)(x-4)} \geq 0 \rightarrow \begin{array}{ccccccc} & 1 & & 4 & & 1 & \\ & | & & | & & | & \\ + & - & + & - & + & - & + \end{array} \quad (-\infty, 1] \cup (4, +\infty) = D_f$

$$\text{الف) } x^2 - 2x + 4 \gg \cdot \rightarrow x^2 - 2x + 9 \gg \cdot \rightarrow (x-4)(x-5) \gg \cdot$$

$$\mu_2^p - \nu_2 + \epsilon > 0 \rightarrow \mu_2^p - \nu_2 + 1/p > 0 \rightarrow (\mu_2 - \nu_2)(\mu_2 - \nu_2 + 1/p) > 0$$

$$\textcircled{1} \cap \textcircled{2} \rightarrow (-\infty, 1) \cup [\frac{\mu}{p}, +\infty)$$

$$x = \frac{\mu}{p} \quad x = \frac{p}{p} = 1$$

$\Rightarrow \frac{P_2 P - d x + P_0}{P_2 P - V x + P} \geq 0$