

نام و نام خانوادگی: ..... پاسخنامه تشریحی تکلیف شماره ۲۶... کلاس: ..... نام و نام خانوادگی: .....  
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$$\frac{1}{x} = \frac{m}{x} \Rightarrow \text{برای } x \rightarrow 9 - 3a + b = 0 \rightarrow -3a + b = -9$$

$$\rightarrow -2a = -1 \Rightarrow a = \frac{1}{2} \checkmark \quad b = 3 \checkmark \rightarrow 3 + \frac{1}{2} \checkmark \checkmark$$

(۲)

$$y = ((k-2)x + m-1)(x-3)^2$$

تفاوت  $k-1$        $\frac{1}{x} = \frac{m}{x}$

$$x_1 = x_2 = -1 \quad m = \frac{-1}{x}$$

$$(k-2)x + m-1 = 0 \rightarrow \frac{-1}{x} - 1 = 0 \rightarrow x = \frac{1-m}{k-2}$$

$$k-2 < 0 \rightarrow k=1 \checkmark$$

$$\frac{1-m}{1-2} = -1 \rightarrow m = 0 \checkmark$$

$$\frac{m}{n} + k = -1 \checkmark$$

(۲)

$$-\frac{1}{4}x^2 + 2x + 5 > \frac{5}{4} \rightarrow -\frac{1}{4}x^2 + 2x + \frac{5}{4} > 0 \quad \Delta = b^2 - 4ac$$

$$\Rightarrow x_1 = \frac{-2 + \sqrt{4-1}}{-1} = -1 \quad x_2 = \frac{-2 - \sqrt{4-1}}{-1} = 2$$

$$b - a = 2 - (-1) = 3 \checkmark$$

(۲)

$$x^2 - 3x^2 - x + 3 \rightarrow x^2(x-3) - 1(x-3) = (x-3)(x^2-1) =$$

$$(x-3)(x-1)(x+1)$$

برای  $x > 0$        $\rightarrow +1$  و  $3 \rightarrow (x-1) > 0$  و  $(x+1) > 0$  و  $(x-3) < 0$

$$(a, b) = (1, 3) \rightarrow x^2 - 3(x^2) - x + 3 = -2 \checkmark$$

(۲)

$$(a-1)x^2 + (a-1)x + 1 < 0 \rightarrow (a-1)(x^2-x) + 1 < 0$$

$$\rightarrow x^2 + x < 0 \rightarrow a-1 < 0 \rightarrow a < 1$$

$$\Delta < 0 \rightarrow (a-1)^2 - 4(a-1) < 0 \rightarrow (a-1)(a-5) < 0$$

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$\frac{1}{+1} \frac{5}{-1} +$   
 $(1, 5)$

$$\frac{m(m^2+m)}{m-2} > \frac{m^2(m^2+1)}{m-2} \rightarrow \frac{0^*}{-1-} \frac{+}{+}$$

$$\Rightarrow D = (2, +\infty) \checkmark$$

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$$\frac{(x^2-x-5)(x-1)^2}{(x^2+x+1)(x-2)^2} \leq 0 \rightarrow \frac{(x-2)(x+2)(x-1)^2}{(x^2+x+1)(x-2)^2} \leq 0$$

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

(2)

$$\frac{2x^2-2x}{x^2+1} < 4 \rightarrow 2x^2-2x < 4x^2+4$$

$$x^2-2x-4 < 0 \rightarrow (x-2)(x+2) < 0 \rightarrow -2 < x < 2 \checkmark$$

(2)

$$-1 < \frac{2x^2-2x}{x+1} < 0 \rightarrow \begin{cases} -1 < \frac{2x^2-2x}{x+1} \rightarrow 0 < \frac{2x^2-2x+1}{x+1} \\ \frac{-1}{-} \frac{+}{+} \rightarrow D = (1, +\infty) \\ \frac{2x^2-2x}{x+1} < 0 \rightarrow \frac{x(2x-2)}{x+1} < 0 \rightarrow \frac{-1}{-} \frac{+}{-} \frac{+}{+} \\ D = (-\infty, -1) \cup (0, \frac{1}{2}) \end{cases}$$

$$\text{استزاد در جواب} \rightarrow (0, \frac{1}{2}) \checkmark$$

(2)

$$\frac{x^2-1}{x} \leq 2 \rightarrow \frac{x^2-1}{x} - 2 \leq 0 \rightarrow \frac{x^2-2x-1}{x} \rightarrow \frac{(x+1)(x-2)}{x} < 0$$

$$\Rightarrow \frac{-2}{-} \frac{+}{+} \frac{+}{-} \Rightarrow D = (-\infty, -2] \cup (0, 2] \checkmark$$

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