

نام و نام خانوادگی: آیدرین محمدی پاسخنامه تشریحی تکلیف شماره ۷ کلاس: یازدهم B ۱

$$f(x) = \sqrt{x+1} \sqrt{x-4}$$

$$g(x) = \sqrt{x-4} \sqrt{x-1}$$

$$f(x) \cdot g(x) = \sqrt{x+1} \sqrt{x-4} \cdot \sqrt{x-4} \sqrt{x-1}$$

$$(f(x) \cdot g(x))^2 = (x+1) \sqrt{x-4} + x-4 \sqrt{x-1} + 2 \sqrt{(x+1)(x-4)(x-1)} = 2x+2x-1 = 4(x-1) \xrightarrow{\sqrt{\quad}} f(x) \cdot g(x) = \sqrt{4(x-1)} = 2\sqrt{x-1}$$

$$\frac{a+b}{c} = \frac{0+2}{-1} = -\frac{1}{1}$$

$$\boxed{a=0} \quad \boxed{b=2} \quad \boxed{c=-1}$$

$$a+b \sqrt{m+c}$$

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$$f(x) = \frac{x+2}{(x-1)(x-2)} \rightarrow D_f = \mathbb{R} - \{1, 2\}$$

$$g(x) = \{(0, 4), (1, 0), (2, 1), (3, 5)\} \rightarrow D_g = \{0, 1, 2, 3\}$$

$$\frac{g}{f} = \{(0, 4), (2, 4)\}$$

$$\begin{aligned} x &\rightarrow 0 & 2 &\rightarrow 1 \\ x &\rightarrow \frac{0+2}{-1+2} = \frac{2}{1} & 2 &\rightarrow \frac{2}{1-2} = -2 \end{aligned}$$

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$$f(x) = \left\{ \left(\frac{1}{2}, 2 \right), \left(\frac{3}{2}, -1 \right), (2, 2), \left(\frac{5}{2}, 4 \right) \right\}$$

$$f(x) = \left\{ (\pm 1, 2), \left(\pm \sqrt{3}, -1 \right), (\pm 2, 2), \left(\pm \sqrt{5}, 4 \right) \right\} \rightarrow \left\{ (-1, 2), (1, 2), (\sqrt{3}, -1), (-\sqrt{3}, -1), (-2, 2), (2, 2) \right\}$$

$$xg^2(x)+1 = \{(-2, 19), (1, 2), (3, 9), (-1, 1)\}$$

$$\frac{xg}{f} = \{(1, -5), (3, -1), (-1, 1)\}$$

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$$h = 2f + g = \{(2, 6), (3, 6), (-2, 6)\}$$

$$x \in \mathbb{N}$$

$$x(1) + 3$$

$$x(0) + 4$$

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$$D_f \Rightarrow \begin{cases} \sqrt{x} > 0 \Rightarrow x > 0 \\ \sqrt{x-1} > 0 \Rightarrow x-1 > 0 \Rightarrow x > 1 \\ x-2 \neq 0 \Rightarrow x \neq 2 \end{cases} \xrightarrow{\text{و}} x > 1 \text{ و } x \neq 2 \rightarrow x(x-2) < 0 \rightarrow \frac{x}{x-2} < 0 \rightarrow D_f = [1, 2] - \{2\}$$

$$D\left(\frac{f}{g+1}\right)(x) = \{0, 1, 2\}$$

$$xg(x)+1 \rightarrow \begin{cases} 1 & n \in \mathbb{Z} \\ 0 & n \notin \mathbb{Z} \end{cases}$$

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$$h(x) = \left[(1, \infty), (1, \frac{e}{e}) \right] \left(\frac{e}{e}, \infty \right) \left(\frac{e}{e}, \infty \right) \right\}$$

$$A(x) = \sqrt{(x-1)(-x+e)}$$

$$g(x) = \{(1, \frac{e}{e}), (\frac{e}{e}, \frac{e}{e}), (\frac{e}{e}, \frac{e}{e}), (e, e)\}$$

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$$a) y = x^2 - 2x + 1 + 1 \Rightarrow y = (x-1)^2 + 1 \Rightarrow (x-1)^2 = y-1 \Rightarrow x-1 = \sqrt{y-1} \Rightarrow x = 1 + \sqrt{y-1} \quad R_y = \mathbb{R}$$

$$b) y = x^2 - 2x + 1 = 0 \Rightarrow x^2 - 2x + 1 = 0 \Rightarrow (x-1)^2 = 0 \Rightarrow x = 1 \Rightarrow y = 0 \Rightarrow R_y = \mathbb{R} - \{0\}$$

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$$a) x_s = \frac{y}{y} = 1 \Rightarrow y_s = 1 - 1 + 1 = 1 \Rightarrow R_y = [1, +\infty)$$

$$b) x_s = \frac{y}{-y} = -1 \Rightarrow y_s = -(-1)^2 + 1 = 0 \Rightarrow R_y = (-\infty, 1]$$

$$c) x_s = \frac{y}{y} = 1 \Rightarrow y_s = 1 - 1 = 0 \Rightarrow R_y = [0, +\infty)$$

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$$d) x_s = \frac{y}{-y} = -1 \Rightarrow y_s = 1 - 1 = 0 \Rightarrow R_y = [0, 1]$$

$$a) R_y = \mathbb{R}$$

$$b) R_y = \mathbb{R}$$

$$c) R_y = \sqrt{1+x} = [0, +\infty)$$

$$d) R_y = \mathbb{R}$$

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$$a) y = \frac{x+1}{x-1} \quad R_y = \mathbb{R} - \{1\}$$

$$b) y = \frac{x+1}{x+1} \quad R_y = \mathbb{R} - \{1\}$$

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