نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۸ کلاس دهم A دختر .....

جمعه ۱۶:۳۰ - ۱۸:۳۰

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الف) $D_{(f)} \neq D_{(g)} \Rightarrow$ برابر نیستند

ب) $D_{(f)} = D_{(g)}$ $f_x = \frac{x^2+4x+3+x+4}{x^2+5x+7} = 1 = g_x \Rightarrow$ برابرند

ج) $D_{(f)} = D_{(g)}$ $f(x) = \frac{2\sin x(\sin x - 3)}{2\sin x - 6} = \sin x = g_x \Rightarrow$ برابرند

د) $D_{(f)} = D_{(g)} = R - \{\}$ $f = g = \begin{cases} 1 & x > 0 \\ -1 & x < 0 \end{cases}$ برابرند

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الف) $D_{(f)} = D_{(g)}$ $f_{(x)} = g_{(x)} = 0 \Rightarrow$ برابرند

ب) $D_{(f)} \neq D_{(g)} \Rightarrow$ برابر نیستند

ج) $D_{(f)} \neq D_{(g)} \Rightarrow$ برابر نیست

د) $D_{(f)} = D_{(g)} = R$ $\frac{x^3-x}{x-1} = x^2+x$, $f_{(1)} = g_{(1)} = 2 \Rightarrow$ برابرند

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$f - g + f + g = 2f = 2x^2 + 2 \longrightarrow f(x) = x^2 + 1$

$g_{(x)}: x^2+1+g(x) = x^2+x+1 \longrightarrow g_{(x)} = x$

$f^2(x) - g^2(x) = x^4 + 2x^2 + 1 - x^2 = x^4 + x^2 + 1$

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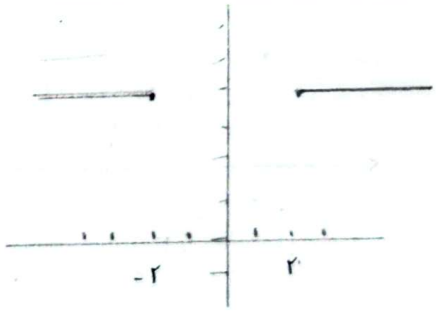
$f \times g = x^2 - (x^2 - 4) = 4$

$D = D_{(f)} \cap D_{(g)}$

$x^2 - 4 \geq 0$

x		-2		2	
	+		−		+

$D = (-\infty, -2] \cup [2, \infty)$



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$f(x) = \frac{2ax+4}{2x^2-2mx+2n}$ $\xrightarrow{f(x)=g(x)}$ $\frac{2ax+4}{2x^2-2mx+2n} = \frac{x-b}{2x^2-2x-5}$

$2a = 1 \longrightarrow a = \frac{1}{2}$ $\quad -b = 4 \longrightarrow b = -4$ $\quad -2m = -2 \longrightarrow m = \frac{2}{2}$

$2n = -5 \longrightarrow n = \frac{-5}{2}$ $\quad am - bn = \frac{1}{2} \times \frac{2}{2} - (-4 \times (-\frac{5}{2})) = \frac{3}{2} - 10 = 9\frac{1}{2}$

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$D_{(f)} = D_{(g)} \longrightarrow a = -\frac{b}{8}$

$f_{(0)} = \frac{2}{b} \qquad g_{(0)} = c \qquad f_{(0)} = g_{(0)} \longrightarrow \frac{2}{b} = c$ ①

$f_{(1)} = \frac{b+2}{8+b} = g_{(1)} = c$ ②

از ۱ و ۲ $\Rightarrow \frac{b+2}{8+b} = \frac{2}{b}$ $b^2 + 2b = 16 + 2b$ $b = \pm 4$

$\frac{ab}{c} = \frac{-\frac{b}{8} \times b}{\frac{2}{b}} = -\frac{b^3}{16}$ $\left[\begin{array}{l} b=4 \to -\frac{64}{16} = -4 \\ b=-4 \to \frac{64}{16} = 4 \end{array}\right.$

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$f = \{(\frac{1}{2}, 0), (2, -6), (3, 4), (2, 0), (-1, 2)\}$ $D_{(f)} \cap D_{(g)} = \{-1, 3, 2\}$

$2g = \{(2, 8), (3, -6), (-1, -8), (12, 3), (7, 2), (5, 0)\}$

$\frac{2g}{f+g} = \{(2, \frac{8}{4+4}), (3, \frac{12}{-2+2}), (-1, \frac{-8}{-4-2})\}$

$R = \{1, 3, 4\}$

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$a = d = -1$ $a - 2b = c$

$3a - 2b = 1 \qquad -3 - 2b = 1 \qquad -4 = 2b \qquad b = -2$

$c = -1 + 5 = 4$

$d + c = -1 + 5 = 4$

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$\Delta = 0$ (ریشه مضاعف) $\qquad 1 - 4m = 0 \qquad m = \frac{1}{4}$

$-x^2 + x - \frac{1}{4} = 0 \Longrightarrow x = \frac{1}{2}$

$f(\frac{1}{2}) = 0 \qquad (\frac{1}{2}, 0) \longrightarrow a = \frac{1}{2}, b = 0$

$a + b = \frac{1}{2}$

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$D_{(f)} = D_{(g)} \longrightarrow (x-c)^2 = x^2 + 6x + b \qquad x^2 - 2cx + c^2 = x^2 + 6x + b$

$-2c = 6 \longrightarrow c = -3 \qquad b = c^2 \longrightarrow b = 9$

$f_{(0)} = g_{(0)} \qquad \frac{a}{b} = \frac{2}{-c} \longrightarrow \frac{a}{9} = \frac{2}{3} \qquad a = 6$

$a + b + c = 6 + 9 - 3 = 12$