September 21, 2016

#1) $g(x) = \frac{x+3}{x-5}$

$x - 5 = 0$

$x = 5$

so $x \neq 5$

$D: (-\infty, 5) \cup (5, \infty)$

$-\infty$ okay) 5 (okay $+\infty$

Sep 21-10:56 AM

#2) $f(x) = \sqrt{x-4}$

$x - 4 \geq 0$

$x \geq 4$

[4 $+\infty$

$D: [4, \infty)$

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#3) $h(t) = t^2 - 3t - 10$

$D: (-\infty, \infty)$

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#4) $g(x) = \frac{x}{x^2 - 9}$

$x^2 - 9 = 0$

$\sqrt{x^2} = \pm\sqrt{9}$

$x = \pm 3$

so $x \neq \pm 3$

$D: (-\infty, -3) \cup (-3, 3) \cup (3, \infty)$

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#5) $f(x) = \frac{\sqrt{x+2}}{x+2}$

$\sqrt{x+2} \geq 0$ $x \geq -2$

$x + 2 = 0$

$x = -2$

so $x \neq -2$ & $x \geq -2$

[-2 $+\infty$

$D: (-2, \infty)$

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#11) $g(a) = -3a - 3$

$f(a) = a^2 + 5$

find $(g - f)(a)$

$g(a) - f(a)$

$(-3a - 3) - (a^2 + 5)$

$-3a - 3 - a^2 - 5$

$-a^2 - 3a - 8$

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#8) $g(m) = 3m + 2$

$f(m) = 2m^2 + 5$

find $g(f(2))$

$3(2(2)^2 + 5) + 2$

$3(2(4) + 5) + 2$

$3(8 + 5) + 2$

$3(13) + 2$

$39 + 2$

41

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$f(x) = x + 5$

$g(x) = x - 3$

find $(f \circ g)(x)$

Input

$g(x)$ → f $(f \circ g)$

Sep 21-11:39 AM