

Given that $f(x) = 2x - 5$ and $g(x) = x^2 - 3x + 6$ find the following:

1. $(f + g)(x)$ 1. _____

2. $(f - g)(x)$ 2. _____

3. $(fg)(x)$ 3. _____

4. $\left(\frac{f}{g}\right)(x)$ 4. _____

5. Find $(f + g)(2)$ 5. _____

6. Find $(f - g)(3)$ 6. _____

7. Find $(fg)(-2)$ 7. _____

8. Find $\left(\frac{f}{g}\right)(6)$ 8. _____

9. Find $(f \circ g)(1)$ 9. _____

10. Find $(g \circ f)(-2)$ 10. _____

Given $f(x) = 2x^2 - 5x + 1$ and $g(x) = 2x - 3$ find the following:

1. $(f \circ g)(3)$ 1. _____

2. $(g \circ f)(1)$ 2. _____

Given that $f(x) = x^2 + 4$ and $g(x) = 3x + 6$ find the following:

3. $(f + g)(-4)$ 3. _____

4. $\left(\frac{f}{g}\right)(12)$ 4. _____

5. What is the domain of $\left(\frac{f}{g}\right)(x)$ 5. _____
in interval notation?

6. $(f \circ g)(x)$ 6. _____

7. $(g \circ f)(x)$ 7. _____

Find $(f \circ g)(1)$, $(g \circ f)(3)$, $(f \circ f)(0)$.

8. $f(x) = |x + 2|$ $g(x) = -x^2$ 8. _____
8. _____
8. _____

9. $f(x) = x$ $g(x) = -3$ 9. _____
9. _____
9. _____

10. $f(x) = x^2 - 1$ $g(x) = \sqrt{x}$ 10. _____
10. _____
10. _____