

## Composition of Functions and Inverses of Functions Review for Quiz

Given  $f(x) = \frac{3x}{4x+1}$ , find each value.

1.  $f(-2)$

2.  $f(n-3)$

Given  $f(x) = x^2 + 1$  and  $g(x) = 5x + 2$ , find each value.

3.  $[f \circ g](x)$

4.  $[g \circ f](x)$

Given  $f(x) = \frac{x-4}{5}$  and  $g(x) = x^2 + 2$ , find each value.

5.  $[f \circ g](x)$

6.  $[g \circ f](x)$

7. Use composition to determine if the functions  $f(x) = 2x - 3$  and  $g(x) = \frac{1}{2}x + \frac{3}{2}$  are inverses of each other. Write *yes* or *no*. Show your work.

**Find the inverses of the functions below. Then state whether the inverse is a function.**

8.  $f(x) = x^2 - 6$

9.  $f(x) = 5 - 2x$

10.  $f(x) = 2x^3 + 3$