

## 2-2 Composite Functions and Domain

Name \_\_\_\_\_

Let  $f(x) = 3x - 2$        $g(x) = x + 10$        $h(x) = 5x$

Find each value below.

1.  $f(g(4)) =$  \_\_\_\_\_

2.  $g(h(-3)) =$  \_\_\_\_\_

3.  $h(g(3)) =$  \_\_\_\_\_

4.  $g(f(2)) =$  \_\_\_\_\_

5.  $g(f(0)) =$  \_\_\_\_\_

6.  $h(g(2)) =$  \_\_\_\_\_

7.  $g(h(10)) =$  \_\_\_\_\_

8.  $f(g(3)) =$  \_\_\_\_\_

State the domain of each function below.

9.  $f(x) = \frac{4+x}{x}$       Domain = \_\_\_\_\_

10.  $f(x) = 8x - 2$       Domain = \_\_\_\_\_

11.  $f(x) = \frac{x^2 - 2}{2x + 9}$       Domain = \_\_\_\_\_

12.  $f(x) = \sqrt{x}$       Domain = \_\_\_\_\_

13.  $f(x) = \sqrt{x-3}$       Domain = \_\_\_\_\_

14.  $f(x) = x^2 - 5$       Domain = \_\_\_\_\_

15.  $f(x) = \sqrt{x+8}$       Domain = \_\_\_\_\_

16.  $f(x) = \sqrt{2x-1}$       Domain = \_\_\_\_\_

17.  $f(x) = \frac{x-2}{x+7}$       Domain = \_\_\_\_\_

18.  $f(x) = \frac{x-9}{x^2 + 4x + 3}$       Domain = \_\_\_\_\_