

## 2.7 Verify through Composition

Date \_\_\_\_\_

**State if the given functions are inverses.**

1)  $h(x) = -\frac{2}{x+1} + 1$

$f(x) = -\frac{2}{x-1} - 1$

2)  $g(x) = \frac{2}{-x-2} + 1$

$f(x) = -\frac{2}{x-1} - 2$

3)  $g(x) = -\frac{3}{x}$

$f(x) = -\frac{3}{x}$

4)  $f(x) = \sqrt[3]{-x+1}$

$h(x) = (x-2)^5 + 1$

5)  $h(x) = \frac{4}{x+1} - 3$

$f(x) = \frac{2}{x+1} - 2$

6)  $h(x) = \frac{12-x}{4}$

$f(x) = -4x + 12$

7)  $f(x) = -2x - 8$

$h(x) = \frac{-8-x}{2}$

8)  $g(x) = \frac{1}{-x+3} - 2$

$f(x) = -\frac{1}{x+2} + 3$

$$9) \quad g(x) = \frac{1}{2}x - 2$$

$$f(x) = \frac{1}{9}x - \frac{4}{9}$$

$$10) \quad g(x) = x + 2$$

$$f(x) = x - 2$$

$$11) \quad f(x) = -\frac{3}{2}x + \frac{3}{2}$$

$$g(x) = 1 - \frac{2}{3}x$$

$$12) \quad g(x) = x + 3$$

$$f(x) = x + 2$$

$$13) \quad f(x) = x^5 + 1$$

$$g(x) = \sqrt[5]{x-1}$$

$$14) \quad h(x) = \frac{4}{x+2} + 1$$

$$f(x) = -\frac{1}{x-3} - 1$$

$$15) \quad g(x) = \frac{3}{x-2} + 2$$

$$f(x) = -\frac{3}{-x+2} + 2$$

$$16) \quad g(x) = \frac{2}{x} + 2$$

$$f(x) = -\frac{4}{x+2} + 1$$

$$17) \quad g(x) = -x + 4$$

$$f(x) = -x + 4$$

$$18) \quad f(x) = \frac{5-x}{5}$$

$$h(x) = -5x + 5$$

## Answers to 2.7 Verify through Composition

1) Yes  
5) No  
9) No  
13) Yes  
17) Yes

2) Yes  
6) Yes  
10) Yes  
14) No  
18) Yes

3) Yes  
7) Yes  
11) Yes  
15) Yes

4) No  
8) Yes  
12) No  
16) No