

Inverses of Linear Functions

Date _____ Period _____

Find the inverse of each function.

1) $f(x) = 2x - 5$

2) $f(x) = \frac{-15 + 3x}{5}$

3) $f(x) = -x + 1$

4) $f(n) = -\frac{5n}{2}$

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

6) $f(x) = \frac{2}{9}x + \frac{10}{9}$

7) $f(n) = -n - 3$

8) $f(x) = \frac{5x}{4}$

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

10) $g(x) = -x - 1$

11) $g(n) = \frac{5}{4}n$

12) $h(x) = 2 + \frac{3}{5}x$

13) $g(x) = \frac{4 - 5x}{2}$

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

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

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

17) $g(x) = \frac{-6 + 3x}{2}$

18) $g(x) = -\frac{3}{2}x + \frac{19}{2}$

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

20) $g(x) = \frac{2x + 15}{5}$

Inverses of Linear Functions

Find the inverse of each function.

1) $f(x) = 2x - 5$ $f^{-1}(x) = \frac{1}{2}x + \frac{5}{2}$

2) $f(x) = \frac{-15 + 3x}{5}$ $f^{-1}(x) = \frac{5x + 15}{3}$

3) $f(x) = -x + 1$
 $f^{-1}(x) = -x + 1$

4) $f(n) = -\frac{5n}{2}$ $f^{-1}(n) = -\frac{2n}{5}$

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

6) $f(x) = \frac{2}{9}x + \frac{10}{9}$ $f^{-1}(x) = -5 + \frac{9}{2}x$

7) $f(n) = -n - 3$
 $f^{-1}(n) = -n - 3$

8) $f(x) = \frac{5x}{4}$ $f^{-1}(x) = \frac{4x}{5}$

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

10) $g(x) = -x - 1$
 $g^{-1}(x) = -x - 1$

11) $g(n) = \frac{5}{4}n$ $g^{-1}(n) = \frac{4}{5}n$

12) $h(x) = 2 + \frac{3}{5}x$ $h^{-1}(x) = \frac{5}{3}x - \frac{10}{3}$

13) $g(x) = \frac{4 - 5x}{2}$ $g^{-1}(x) = \frac{-2x + 4}{5}$

14) $g(x) = 2 - \frac{3}{2}x$ $g^{-1}(x) = -\frac{2}{3}x + \frac{4}{3}$

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

16) $f(x) = \frac{x + 5}{2}$
 $f^{-1}(x) = 2x - 5$

17) $g(x) = \frac{-6 + 3x}{2}$ $g^{-1}(x) = \frac{2x + 6}{3}$

18) $g(x) = -\frac{3}{2}x + \frac{19}{2}$ $g^{-1}(x) = -\frac{2}{3}x + \frac{19}{3}$

19) $f(x) = 2 + \frac{2}{5}x$ $f^{-1}(x) = \frac{5}{2}x - 5$

20) $g(x) = \frac{2x + 15}{5}$ $g^{-1}(x) = \frac{5x - 15}{2}$

Name:

Inverse Functions (Linear) – See if any of the functions are inverse of each other.

$$g(x) = 4 - \frac{3}{2}x$$

$$f(n) = \frac{-16 + n}{4}$$

$$g(n) = \frac{-12 - 2n}{3}$$

$$g(n) = 4n + 16$$

$$f(n) = \frac{-5 + 6n}{5}$$

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

Name:

Inverse Functions (Linear) – See if any of the functions are inverse of each other.

$$f(x) = -\frac{4}{7}x - \frac{16}{7}$$

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

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

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

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

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