

Name : _____

Score : _____

Teacher : _____

Date : _____

Inverses of Functions

Determine whether the functions are inverses.

$$1) \quad f(n) = \frac{5}{7}n - 4$$
$$g(n) = \frac{7(n+4)}{5}$$

$$2) \quad f(r) = \frac{8+5r}{7}$$
$$g(r) = \frac{7r-8}{5}$$

$$3) \quad f(k) = -4k - 11$$
$$g(k) = \frac{k+11}{-4}$$

$$4) \quad f(s) = (s + 6)^3$$
$$g(s) = s^{\frac{1}{3}} - 6$$

$$5) \quad f(b) = 3(b + 11)^4$$
$$g(b) = 3b^{\frac{1}{4}} - 11$$

$$6) \quad f(m) = 10m$$
$$g(m) = \frac{1}{10}m + 3$$

Find the inverse of each function.

$$7) \quad f(x) = \frac{5}{2}x + 3$$

$$8) \quad f(y) = \frac{7+8y}{3}$$

$$9) \quad f(z) = 11z - 2$$

$$10) \quad f(d) = (d + 10)^4$$

$$11) \quad f(q) = 11(q - 4)^4$$

$$12) \quad f(w) = -8w$$



Name : _____

Score : _____

Teacher : _____

Date : _____

Inverses of Functions

Determine whether the functions are inverses.

1) $f(n) = \frac{5}{7}n - 4$

$$g(n) = \frac{7(n+4)}{5}$$

Yes

2) $f(r) = \frac{8+5r}{7}$

$$g(r) = \frac{7r-8}{5}$$

Yes

3) $f(k) = -4k - 11$

$$g(k) = \frac{k+11}{-4}$$

Yes

4) $f(s) = (s + 6)^3$

$$g(s) = s^{\frac{1}{3}} - 6$$

Yes

5) $f(b) = 3(b + 11)^4$

$$g(b) = 3b^{\frac{1}{4}} - 11$$

No

6) $f(m) = 10m$

$$g(m) = \frac{1}{10}m + 3$$

No

Find the inverse of each function.

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

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

8) $f(y) = \frac{7+8y}{3}$

$$f^{-1}(y) = \frac{3y-7}{8}$$

9) $f(z) = 11z - 2$

$$f^{-1}(z) = \frac{z+2}{11}$$

10) $f(d) = (d + 10)^4$

$$f^{-1}(d) = d^{\frac{1}{4}} - 10$$

11) $f(q) = 11(q - 4)^4$

$$f^{-1}(q) = \left(\frac{q}{11}\right)^{\frac{1}{4}} + 4$$

12) $f(w) = -8w$

$$f^{-1}(w) = \frac{w}{-8}$$

