Ex. 4 $f(x) = \dfrac{4x + 9}{3x - 4}$

Verifying Rational Inverses

$$f(g(x)) = g(f(x)) = x$$

Example 1: Verify that f(x) and g(x) are inverses. $f(x) = \dfrac{3}{x-4}$ $g(x) = \dfrac{3}{x} + 4$

Graphing Inverses:

1.

2.

3.

Ex. 5 Graph the original rational function and find the domain and range.
     Then, find the inverse, graph it, and find the inverse domain and range.
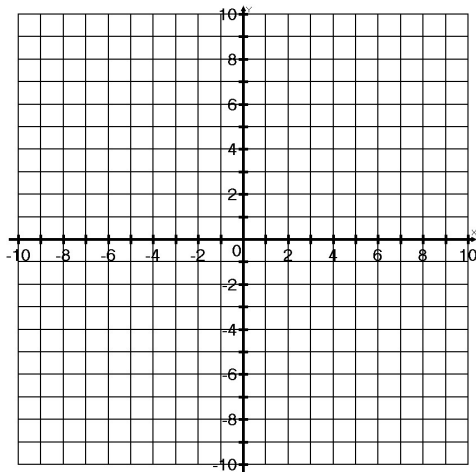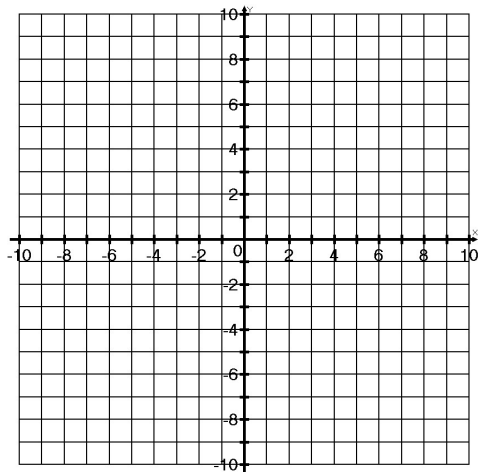
$f(x) = \dfrac{2}{x+3} - 1$

Domain: Domain:

Range: Range:

To find the inverse of a function,

1.

2.

Find the inverses of the following functions.
Then, find the domain and range of the original and inverse.

Ex. 2

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

Ex. 3

$$f(x) = \dfrac{2x-3}{4-3x}$$