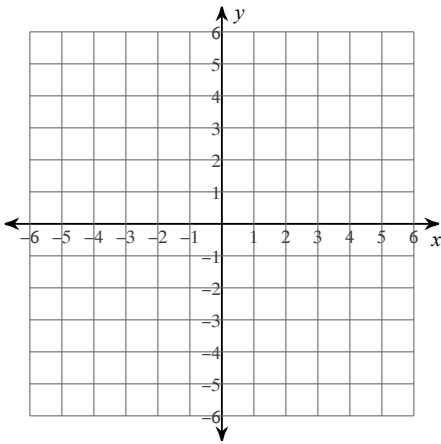


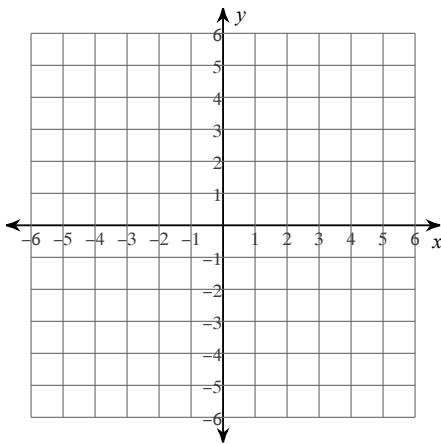
7.3 Inverse Functions

Graph each function and its inverse. State the domain and range of both.

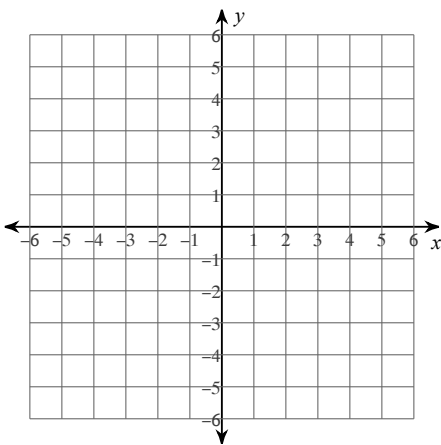
1) $f(x) = -\frac{5}{2}x - 5$



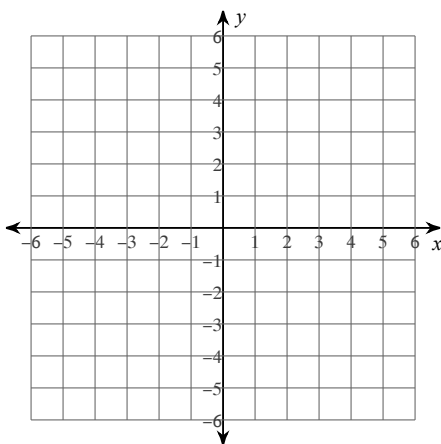
2) $f(x) = 2 - x^3$



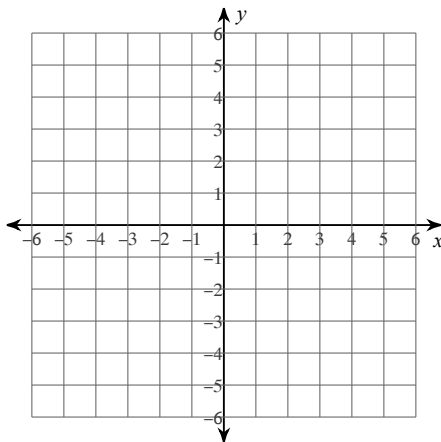
3) $f(x) = -\frac{4x}{3}$



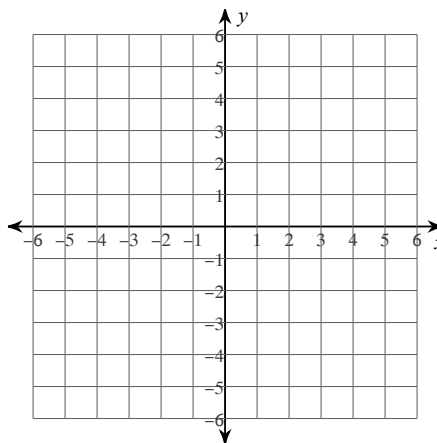
4) $f(x) = \sqrt[3]{x} - 1$



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



6) $g(x) = -(x + 3)^3$



Fill in the missing information.

7) Domain $f(x)$: $(-\infty, \infty)$

Range $f(x)$:

Domain $f^{-1}(x)$: $(3, \infty)$

Range $f^{-1}(x)$:

8) Domain $f(x)$: $(-8, 230)$

Range $f(x)$: $(-\infty, 7)$

Domain $f^{-1}(x)$:

Range $f^{-1}(x)$:

9) Domain $f(x)$:

Range $f(x)$: $(-\infty, 18]$

Domain $f^{-1}(x)$:

Range $f^{-1}(x)$: $(-\infty, \infty)$

10) Domain $f(x)$:

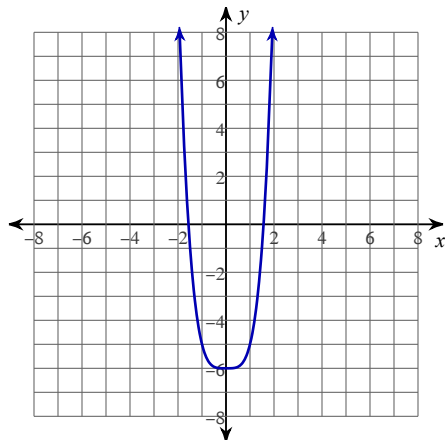
Range $f(x)$:

Domain $f^{-1}(x)$: $(-8, \infty)$

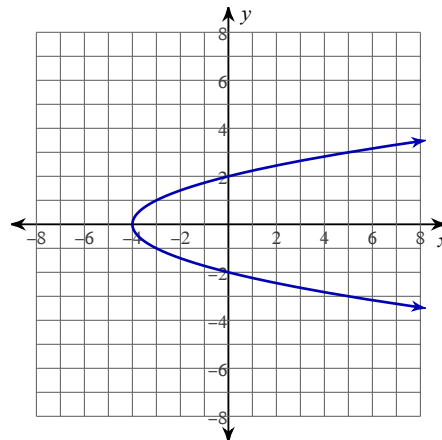
Range $f^{-1}(x)$: $(-10, \infty)$

Determine if each graph is a function.

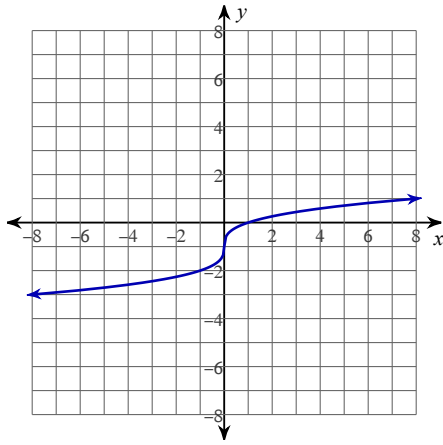
11)



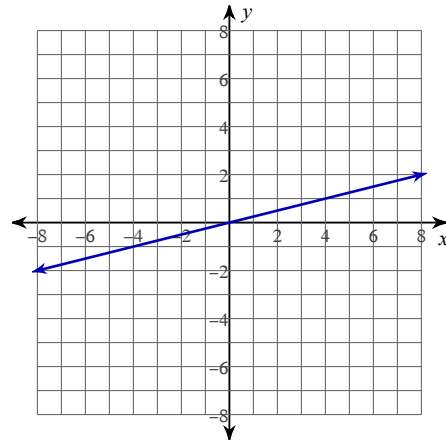
12)



13)



14)



Find the inverse of each function.

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

16) $f(x) = -2x^3 + 2$

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

18) $g(x) = \frac{-2x + 14}{5}$

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

20) $g(x) = \frac{1}{x + 3} + 1$

21) $f(n) = (n - 2)^3 - 3$

22) $g(x) = \frac{-4 - \sqrt[3]{4x}}{2}$