Algebra 2 Name_____ ID: 1

Inverse Functions

Find the inverse of each function.

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

2) $g(x) = \dfrac{4}{x - 1} - 2$

3) $g(x) = \sqrt[3]{x - 2} + 2$

4) $f(n) = \dfrac{4n + 4}{3}$

5) $g(x) = \sqrt[3]{\dfrac{x - 1}{2}}$

6) $h(x) = -2x + 5$

7) $g(n) = \dfrac{2}{-n - 2} - 1$

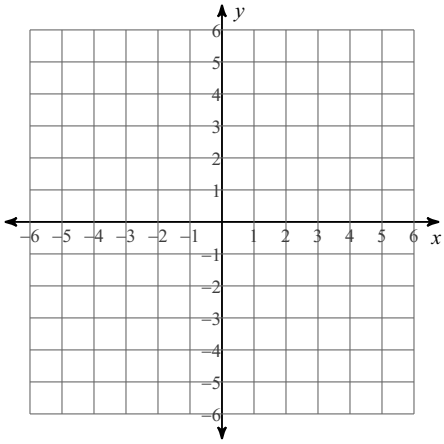
8) $g(n) = -\dfrac{2}{5}n - 2$

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

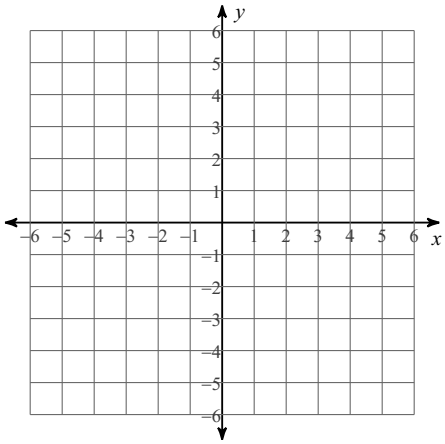
10) $f(n) = \dfrac{4}{n + 2} + 1$

Find the inverse of each function. Then graph the function and its inverse.

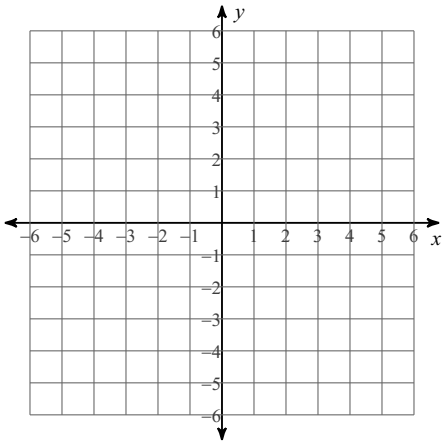
11) $g(x) = -x^3 - 1$



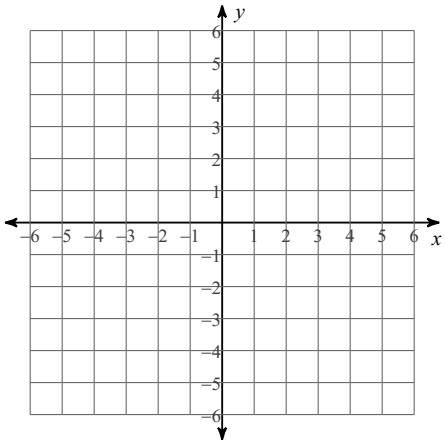
12) $g(x) = \sqrt[5]{x - 3} - 1$



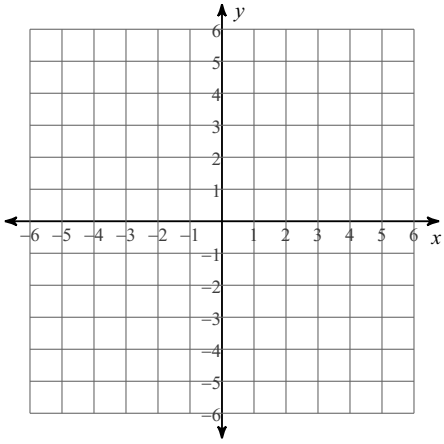
13) $h(x) = -\dfrac{1}{x + 3}$



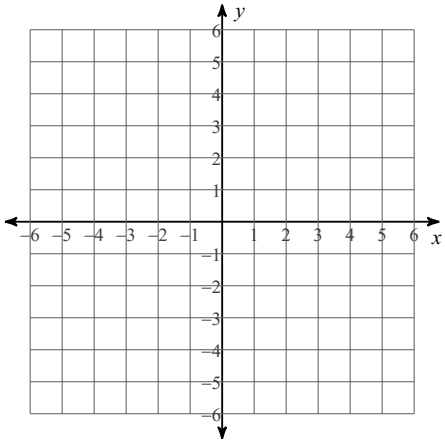
14) $g(x) = \sqrt[3]{\dfrac{x}{2}}$



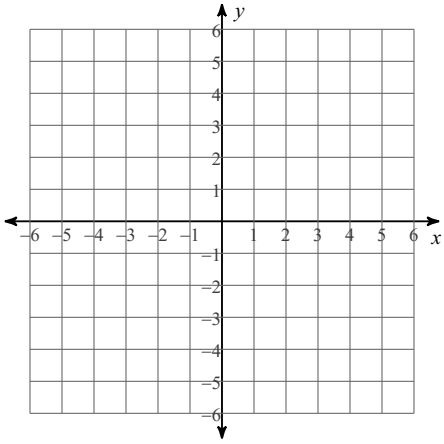
15) $f(x) = \dfrac{1}{-x + 3}$



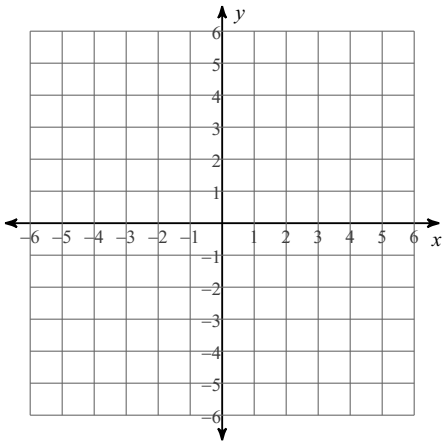
16) $h(x) = (x - 2)^3 - 2$



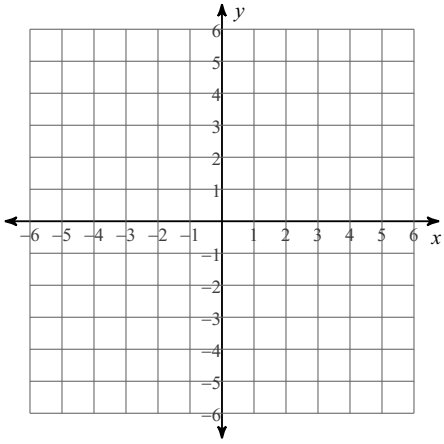
17) $h(n) = \sqrt[3]{n + 1} + 1$



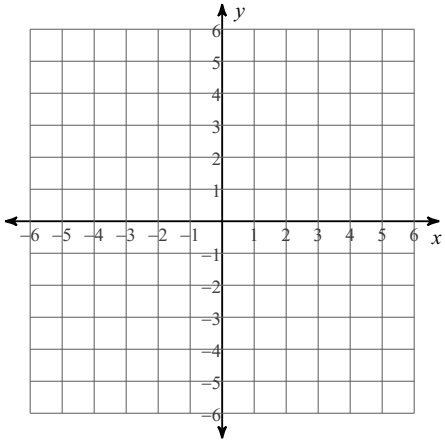
18) $h(x) = \dfrac{4}{3}x - \dfrac{20}{3}$



19) $g(x) = \dfrac{-2x + 8}{3}$



20) $f(n) = \dfrac{3}{n} + 2$



Answers to Inverse Functions (ID: 1)

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

2) $g^{-1}(x) = \dfrac{4}{x+2} + 1$

3) $g^{-1}(x) = (x-2)^3 + 2$

4) $f^{-1}(n) = \dfrac{-4+3n}{4}$

5) $g^{-1}(x) = 1 + 2x^3$

6) $h^{-1}(x) = -\dfrac{1}{2}x + \dfrac{5}{2}$

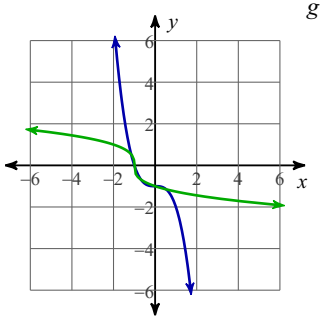
7) $g^{-1}(n) = -\dfrac{2}{n+1} - 2$

8) $g^{-1}(n) = -5 - \dfrac{5}{2}n$

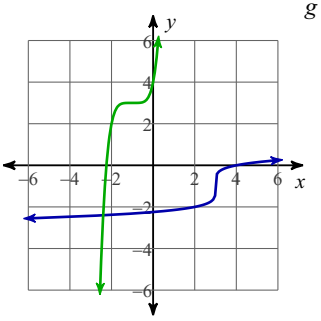
9) $g^{-1}(x) = \dfrac{4}{x+2} + 3$

10) $f^{-1}(n) = \dfrac{4}{n-1} - 2$

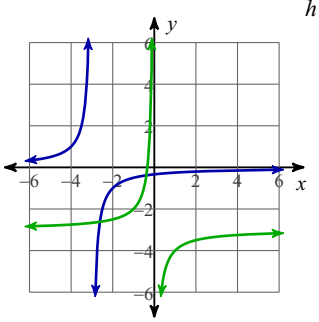
11) $g^{-1}(x) = \sqrt[3]{-x-1}$



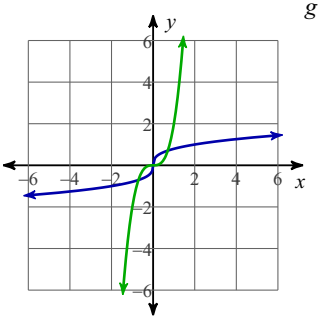
12) $g^{-1}(x) = 3 + (x+1)^5$



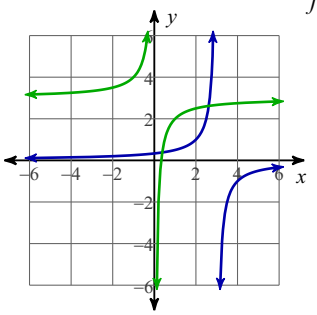
13) $h^{-1}(x) = -\dfrac{1}{x} - 3$



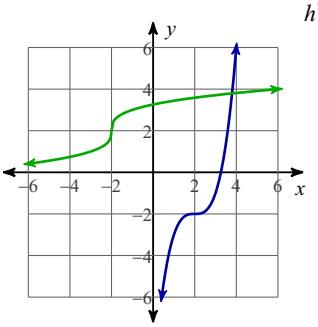
14) $g^{-1}(x) = 2x^3$



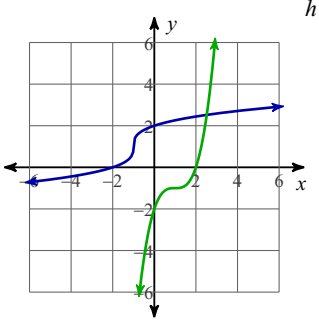
15) $f^{-1}(x) = -\dfrac{1}{x} + 3$



16) $h^{-1}(x) = \sqrt[3]{x+2} + 2$

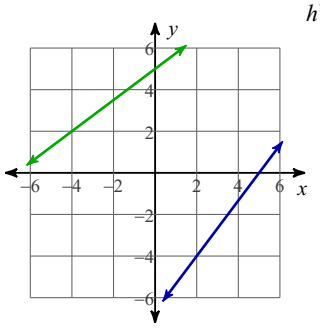


17) $h^{-1}(n) = -1 + (n-1)^3$



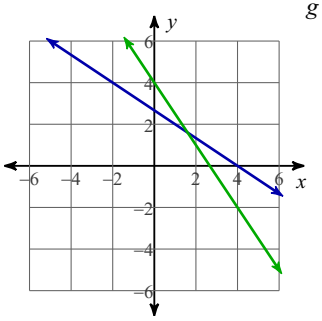
18)

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



19)

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



20)

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