Algebra 3-4 Name_____

WS Inverse Practice

Date_____ Period____

State if the given functions are inverses.

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

2) $f(x) = -\frac{1}{2}x - 2$
$g(x) = \frac{-15 + 8x}{5}$

3) $h(x) = x + 2$
$f(x) = x - 2$

4) $f(x) = -2x - 2$
$g(x) = 2 + \frac{7}{4}x$

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

6) $f(x) = x$
$g(x) = \frac{10 - x}{2}$

7) $f(x) = \frac{1}{3}x - \frac{4}{3}$
$g(x) = 3x + 4$

8) $f(x) = -\frac{3}{5}x - \frac{6}{5}$
$g(x) = -x - 4$

9) $f(x) = \frac{5x - 5}{3}$
$h(x) = \frac{5 + 3x}{5}$

10) $f(x) = -4 + \frac{8}{5}x$
$g(x) = \frac{5}{8}x + \frac{5}{2}$

Find the inverse of each function.

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

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

13) $f(n) = -\sqrt[5]{n} - 3$

14) $h(x) = \frac{4}{x}$

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

16) $f(n) = -n$

17) $g(n) = -2(n-1)^5$

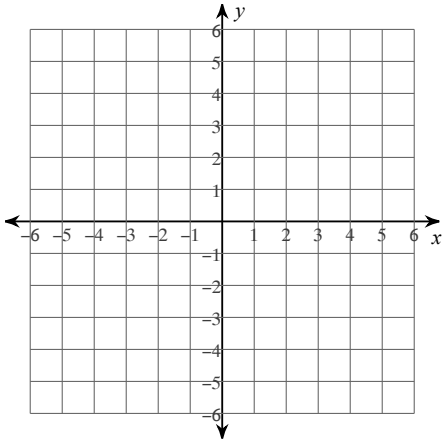
18) $h(n) = -\frac{7}{2}n - \frac{15}{2}$

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

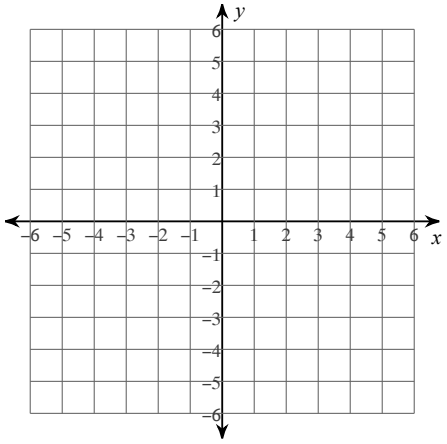
20) $h(x) = -5 + \frac{3}{2}x$

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

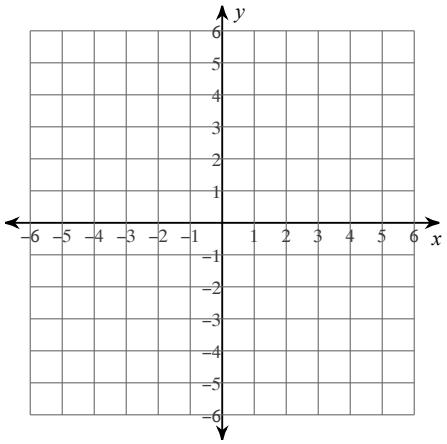
21) $h(x) = -3 + (x+2)^3$



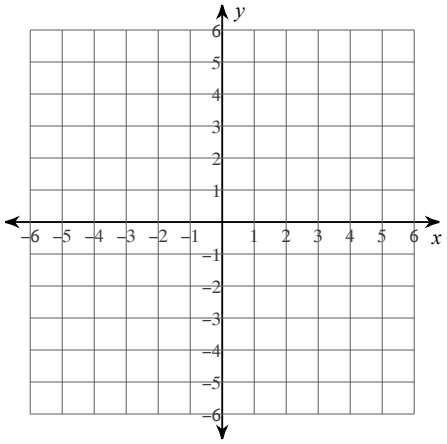
22) $f(x) = \sqrt[5]{x-2} - 1$



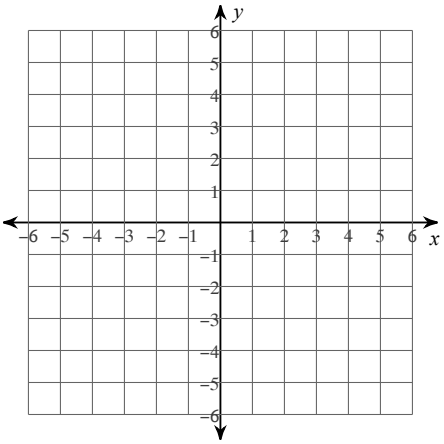
23) $f(x) = \sqrt[3]{x+3} - 2$



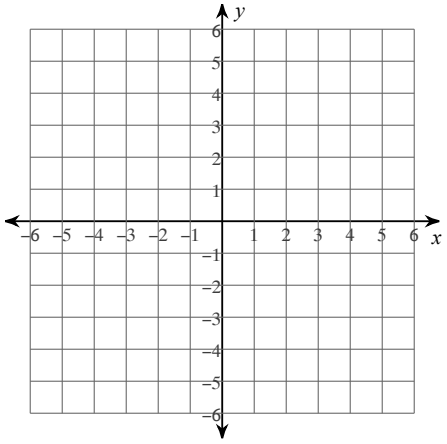
24) $f(x) = \dfrac{2x-7}{3}$



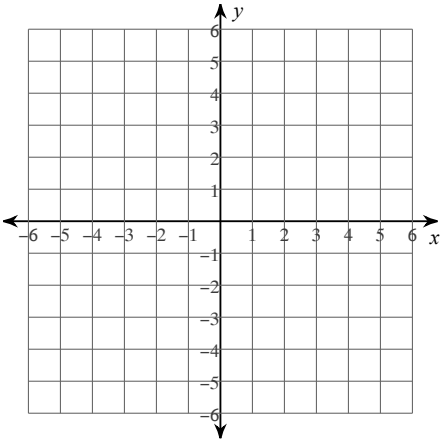
25) $g(x) = (x-3)^5$



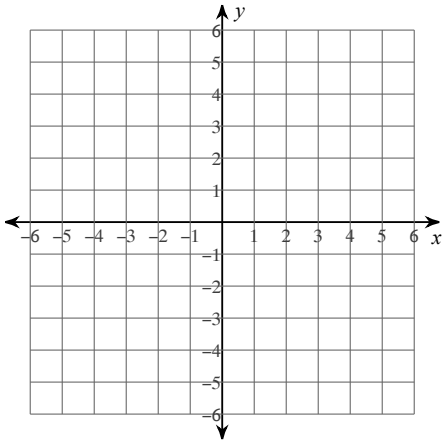
26) $h(x) = -\dfrac{5}{2}x - \dfrac{25}{2}$



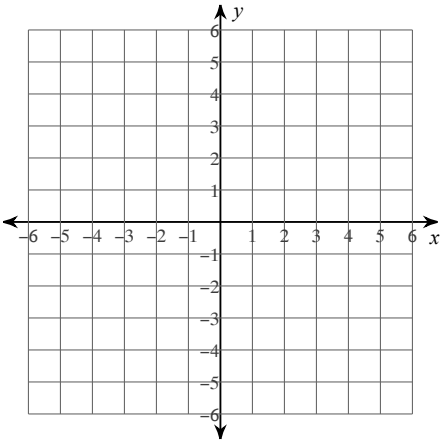
27) $g(x) = \dfrac{-5x+25}{9}$



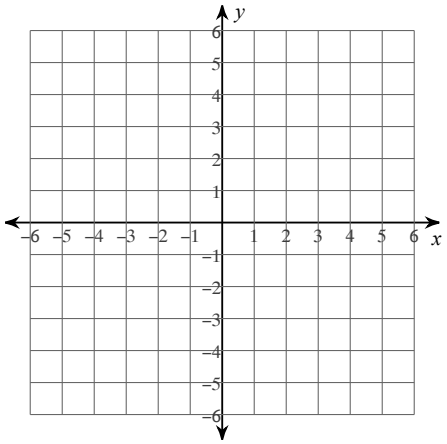
28) $g(n) = -3n + 2$



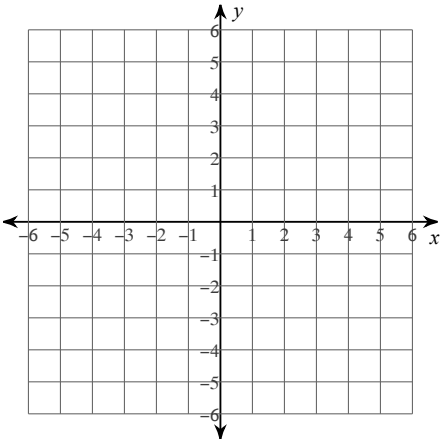
29) $f(x) = -2x^5$



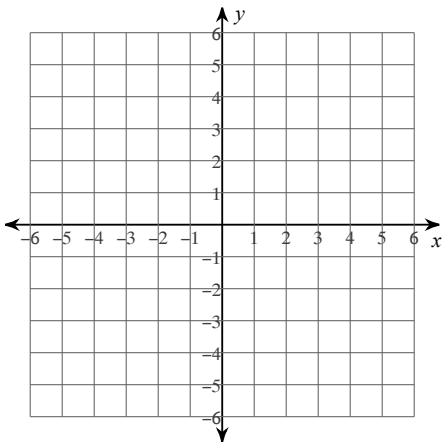
30) $f(x) = \sqrt[3]{-\frac{x}{2}}$



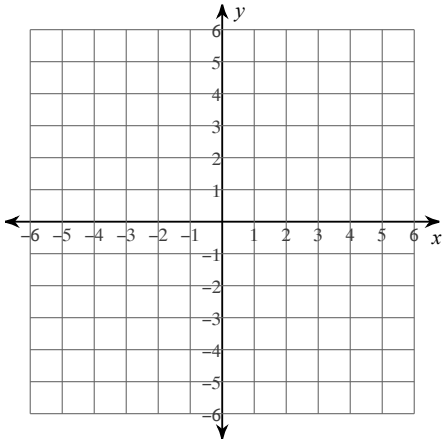
31) $f(n) = -\frac{4}{-n-1}$



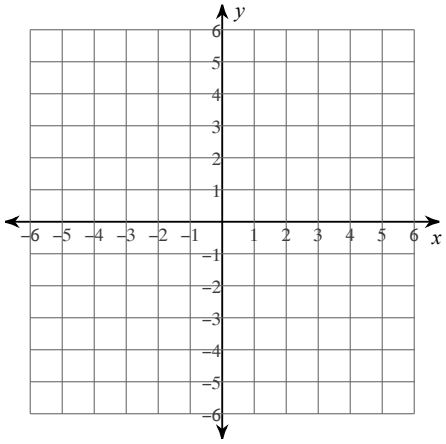
32) $g(n) = -\frac{5}{2}n + \frac{5}{2}$



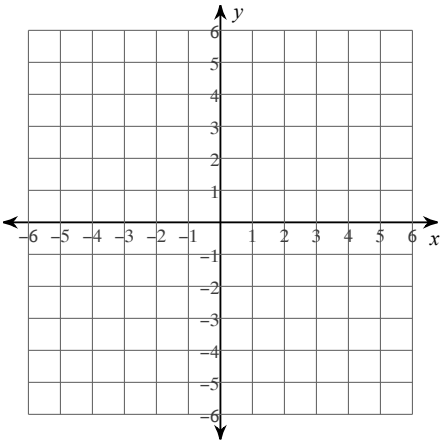
33) $f(x) = -\dfrac{2}{x+3} - 1$



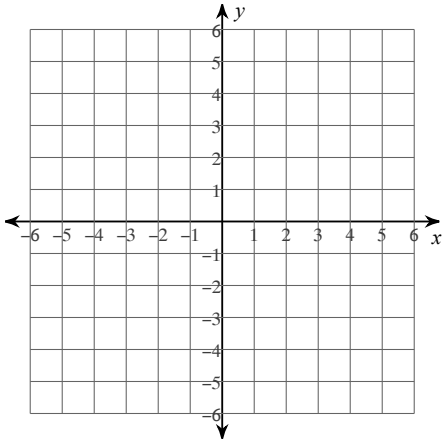
34) $g(x) = 4x - 8$



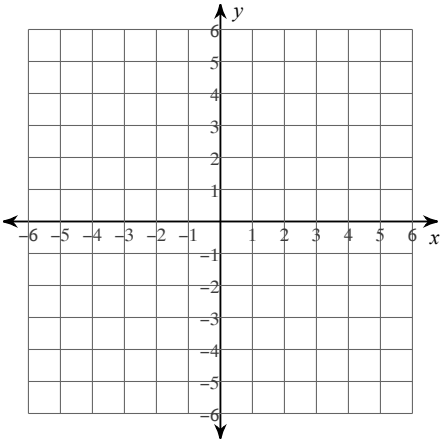
35) $g(x) = \dfrac{1}{x} - 3$



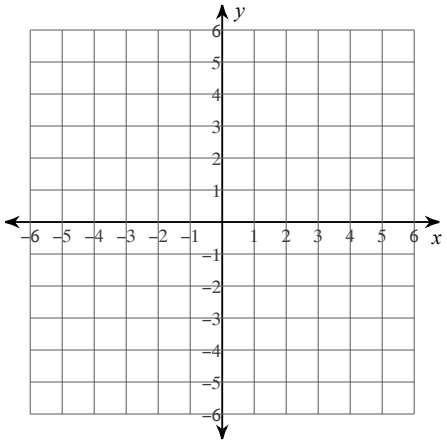
36) $f(x) = x^5$



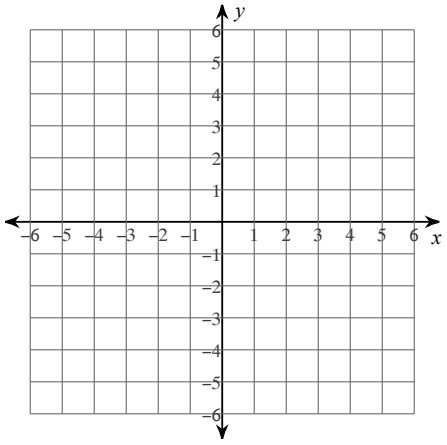
37) $f(x) = (x+2)^5$



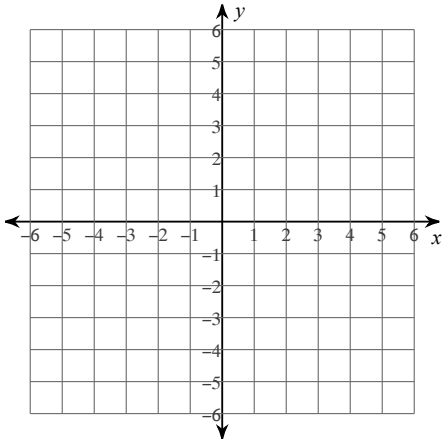
38) $g(x) = x - 2$



39) $h(x) = \dfrac{3}{-x+2} - 2$



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



Answers to WS Inverse Practice

1) Yes
2) No
3) Yes
4) No
5) No
6) No
7) Yes
8) No
9) Yes
10) Yes

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

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

13) $f^{-1}(n) = -(n+3)^5$

14) $h^{-1}(x) = \frac{4}{x}$

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

16) $f^{-1}(n) = -n$

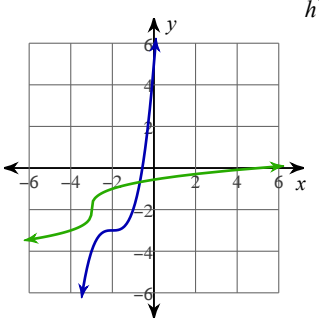
17) $g^{-1}(n) = \frac{2 - \sqrt[5]{16n}}{2}$

18) $h^{-1}(n) = -\frac{2}{7}n - \frac{15}{7}$

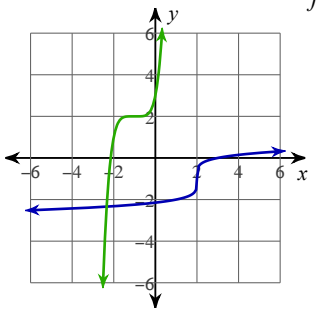
19) $f^{-1}(x) = -(x+1)^5$

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

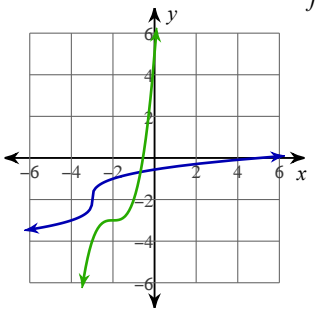
21) $h^{-1}(x) = \sqrt[3]{x+3} - 2$



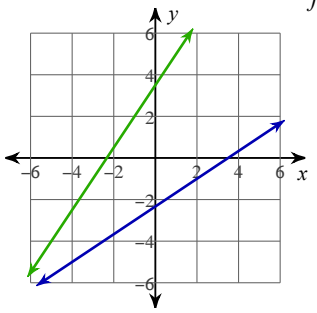
22) $f^{-1}(x) = 2 + (x+1)^5$



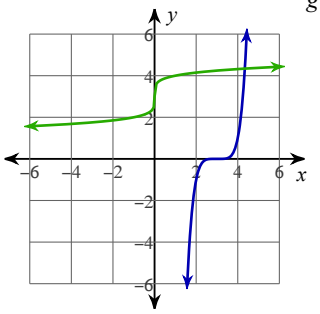
23) $f^{-1}(x) = -3 + (x+2)^3$



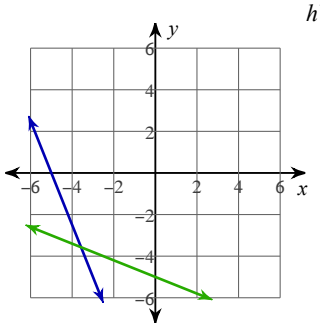
24) $f^{-1}(x) = \frac{3x+7}{2}$



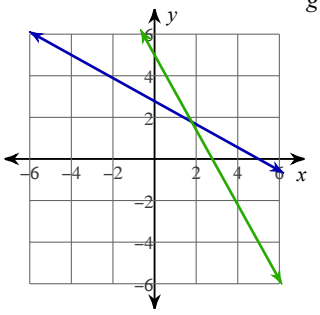
25) $g^{-1}(x) = \sqrt[5]{x} + 3$



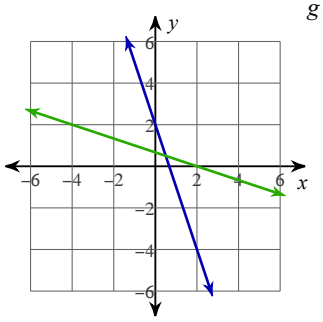
26) $h^{-1}(x) = -5 - \frac{2}{5}x$



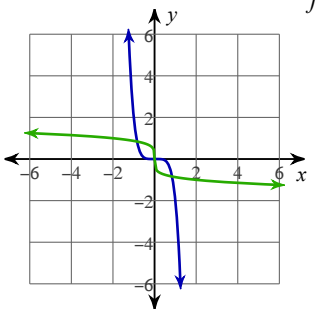
27) $g^{-1}(x) = \frac{25 - 9x}{5}$



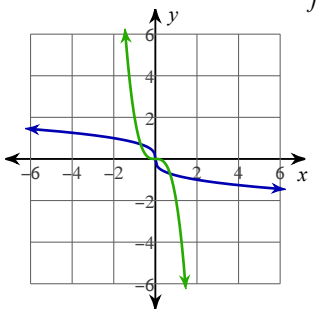
28) $g^{-1}(n) = -\frac{1}{3}n + \frac{2}{3}$



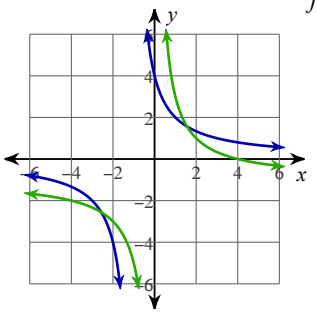
29) $f^{-1}(x) = \sqrt[5]{-\frac{x}{2}}$



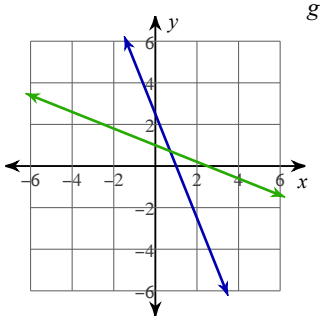
30) $f^{-1}(x) = -2x^3$



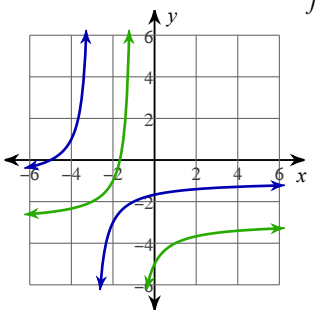
31) $f^{-1}(n) = \frac{4}{n} - 1$



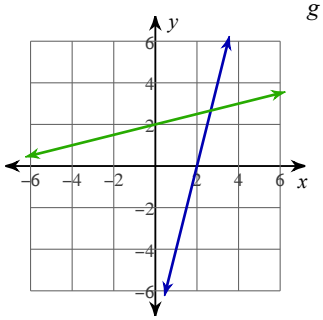
32) $g^{-1}(n) = 1 - \frac{2}{5}n$



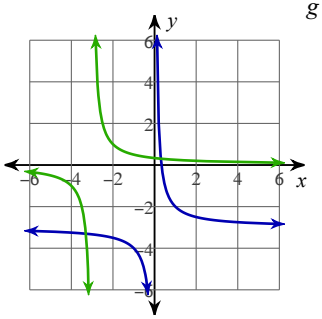
33) $f^{-1}(x) = -\frac{2}{x+1} - 3$



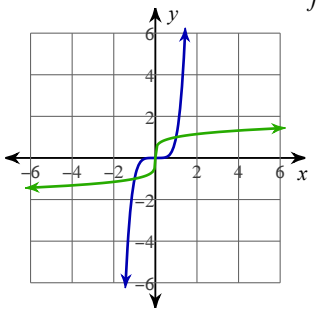
34) $g^{-1}(x) = 2 + \frac{1}{4}x$



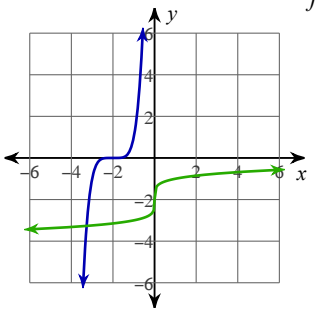
35) $g^{-1}(x) = \frac{1}{x+3}$



36) $f^{-1}(x) = \sqrt[5]{x}$

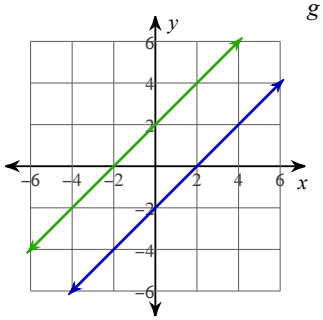


37) $f^{-1}(x) = \sqrt[5]{x} - 2$



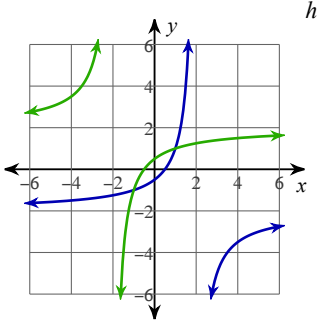
38)

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



39)

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



40)

$f^{-1}(x) = 1 - \frac{4}{3}x$