SM3 HW #4-3 (Inverse Functions)

Date_____ Period____

Find the inverse of each function.

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

2) $g(x) = (x-1)^3 - 2$

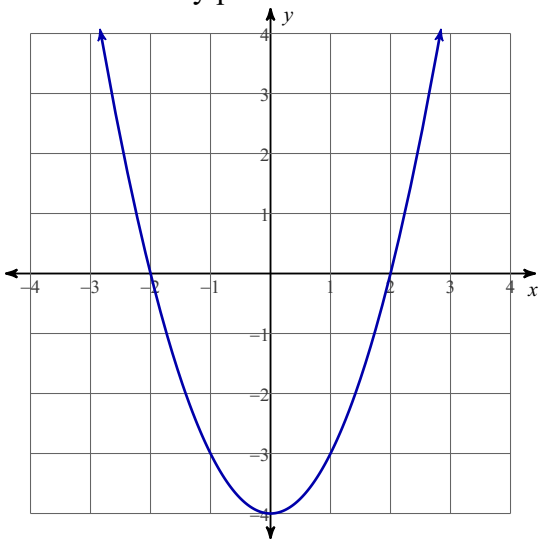
3) $f(x) = \frac{9}{10}x + \frac{1}{2}$

4) $g(x) = -2 - 2x^5$

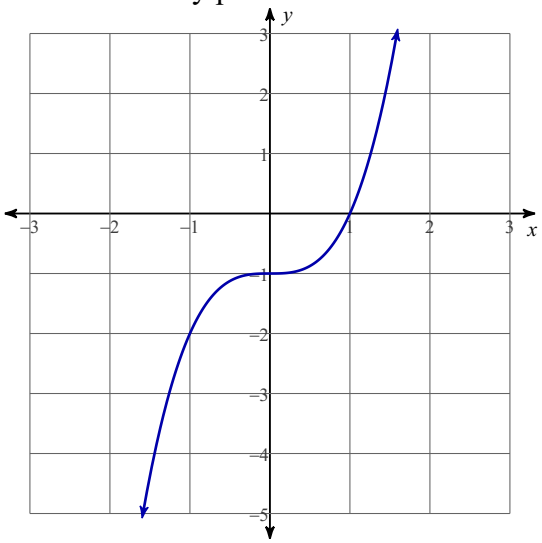
5) $f(x) = \frac{4}{x+3} - 1$

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

7) Graph the inverse of the following function on the same x-y plot



8) Graph the inverse of the following function on the same x-y plot



Solve each equation. Remember to check for extraneous solutions.

9) $5 + \sqrt{2k - 9} = 8$

10) $-1 + \sqrt{1 - p} = 2$

11) $12 = 9 + \sqrt{x - 9}$

12) $-5 + \sqrt{4 - 3x} = 0$

Solve each equation.

13) $n^{\frac{3}{2}} = 512$

14) $243 = n^{\frac{5}{3}}$

15) $3(b - 23)^{\frac{5}{3}} = 729$

16) $81 = 3(m + 16)^{\frac{3}{4}}$

17) How can you tell if the inverse of a function will be a function?

18) We call functions whose inverses are also functions "one-to-one" functions. What does "one-to-one" mean?