Math-3 Name_____ ID: 1

SM3 HW #4-7 (Review #2)

Period____

Perform the indicated operation.

1) $g(x) = -3x^3 + 2x^2$
$h(x) = 3x - 1$
Find $(g \cdot h)(x)$

2) $f(n) = 2n + 2$
$g(n) = n + 5$
Find $(f \cdot g)(-9)$

3) $h(n) = 2n$
$g(n) = n^3 - 3$
Find $\left(\frac{h}{g}\right)(n)$

4) $g(t) = t^2 - 2$
$h(t) = 3t - 2$
Find $(g \circ h)(t)$

5) $f(x) = -x + 1$
$g(x) = 2x + 5$
Find $\left(\frac{f}{g}\right)(-9)$

6) $g(t) = 2t + 1$
$f(t) = t^2 + 5$
Find $(g \circ f)(-3)$

7) $g(x) = -3x + 5$
$h(x) = -x^2 + 1$
Find $(-3g - 2h)(x)$

8) $h(x) = 4x - 4$
$g(x) = x + 3$
Find $(h - 5g)(6)$

9) Solve:
$a^2 + 7 = 56$

10) Write the equation of a line that passes through: $(4, 2)$ and $(3, -3)$

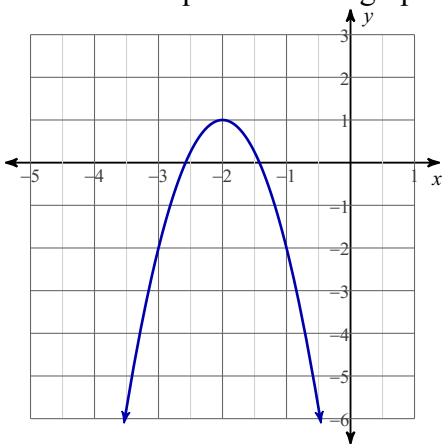
11) Find the zeroes.

$y = -2(x - 6)^2 - 10$

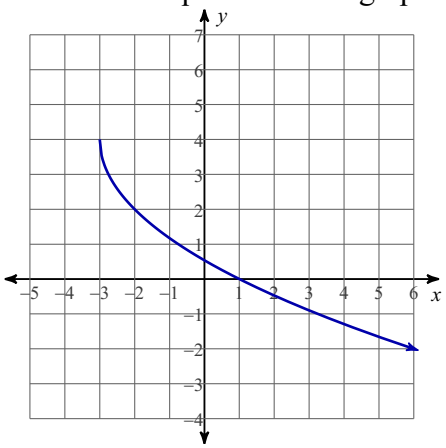
12) Find the zeroes.

$y = 3(x + 2)^2 - 36$

13) What is the equation of the graph?



14) What is the equation of the graph?



Find the inverse of each function.

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

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

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

18) $g(x) = -3 + (x - 1)^3$

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

20) $g(x) = \dfrac{3x}{x-2} - 1$

Solve each equation. Remember to check for extraneous solutions.

21) $5\sqrt{14p+2} = 50$

22) $-5 + \sqrt{4-3x} = 0$

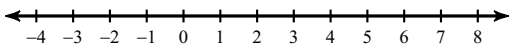
Solve each equation.

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

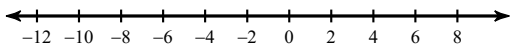
24) $25 = (25x)^{\frac{2}{3}}$

Solve each compound inequality and write its solution as
a) simplified inequality
b) graph
c) Interval notation.

25) $x - 10 < -9$ or $x - 10 > -6$



26) $b - 4 > -13$ and $-6b > -42$



27) Solve.
$(x+7)(2x-3) > 0$

28) a) Factor
b) Solve:
$4x^2 + 4x - 3 \le 0$