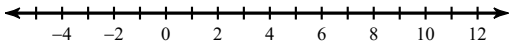
Math-3A Name_____ ID: 1

SM3-A HW #6-7 (solve quadratic inequalities)

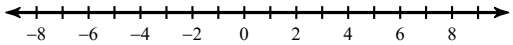
Date_____ Period____

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

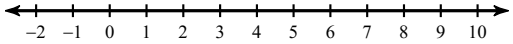
1) $\frac{x}{5} \leq 0$ or $8x > 56$



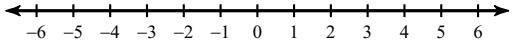
2) $10 + b < 16$ and $10b > -50$



3) $n + 9 < 14$ or $10n > 60$



4) $n - 6 > -11$ and $n - 7 < -6$



5) Solve
Give the solution as a:
a) graph
b) interval
$(x - 5)(x - 1) > 0$

6) Solve
Give the solution as a:
a) graph
b) interval
$(r + 7)(7r - 2) \leq 0$

7) a) Write in factored form
b) Solve, Write the solution as an interval
$2x^2 + 15x + 27 \geq 0$

8) a) Write in factored form
b) Solve, write the solution as an interval
$x^4 - 17x^2 + 16 < 0$

Solve each inequality, give your answers in "interval notation."

9) $0 < -m^2 + 4m + 21$

10) $0 > x^2 + 7x + 10$

11) $x^2 - 10x + 21 \geq 0$

12) $-x^2 + 13x - 42 > 0$

Perform the indicated operation.

13) $h(x) = -2x^2 + 4x$
$g(x) = 2x + 4$
Find $(-4h - g)(x)$

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

Find the inverse of each function.

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

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