

Math-3 HW #4-4 (solve quadratic inequalities)

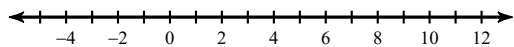
Solve each compound inequality and write its solution as

a) simplified inequality

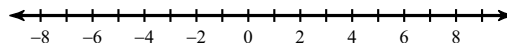
b) graph

c) Interval notation.

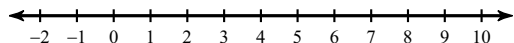
1) $\frac{x}{5} \leq 0$ or $8x > 56$



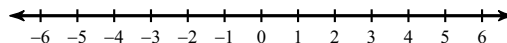
2) $10 + b < 16$ and $10b > -50$



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



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



5) Solve using "boundary numbers method".

Give the solution as a:

a) graph

b) simplified inequality

c) interval

$(x - 5)(x - 1) > 0$

6) Solve using "boundary numbers method".

Give the solution as a:

a) graph

b) simplified inequality

c) 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

$x^2 - 17x + 16 < 0$

9) Solve (answer as an interval)
 $0 > x^2 + 7x + 10$

10) Solve (answer as an interval)
 $x^2 - 10x + 21 \geq 0$

Find the "zeroes" of the equations by finding square roots.

11) $n^2 - 5 = 0$

12) a) Write the equation in factored form
b) find the zeroes of the equation
 $y = 2x^2 + 3x - 2$

Solve the equation.

13) $x^2 + 8x + 1 = 0$

14) $x^2 + 14x - 18 = 0$

Perform the indicated operation.

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

16) $g(n) = n^2 + 2$
 $h(n) = n + 5$
Find $(g \circ h)(-9)$

Find the inverse of each function.

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

18) $g(n) = \frac{1}{-n-2} + 1$