

SM3-A HW #6-8 (review)

Date _____ Period _____

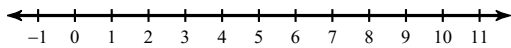
Solve each compound inequality and write its solution as

a) simplified inequality

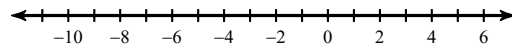
b) graph

c) Interval notation.

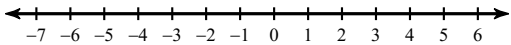
1) $x + 2 < 4$ or $3x \geq 18$



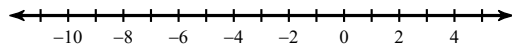
2) $-6m < -18$ or $m + 6 < 0$



3) $\frac{v}{2} \geq -3$ and $v - 10 < -5$



4) $x + 9 \leq 13$ and $x + 10 \geq 2$



5) Solve

Give the solution as a:

a) graph

b) interval

$(x + 2)(x - 4) > 0$

6) Solve

Give the solution as a:

a) graph

b) interval

$(2x + 3)(3x - 1) \leq 0$

7) a) Write in factored form

b) Solve, Write the solution as an interval

$3x^2 + 7x - 6 \geq 0$

8) a) Write in factored form

b) Solve

$x^2 - 15x - 34 = 0$

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

9) $x^2 + x < 0$

10) $x^2 - 9x + 18 > 0$

Perform the indicated operation.

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

12) $g(x) = -3x$
 $h(x) = 4x - 1$
Find $(g \circ h)(-1)$

Find the inverse of each function.

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

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

Solve each equation. Remember to check for extraneous solutions.

15) $24 = 4\sqrt{2p+18}$

16) $-5 = -6 + \sqrt{-6-n}$

Solve each equation.

17) $729 = b^{\frac{3}{2}}$

18) $729 = (x+15)^{\frac{3}{2}}$

Solve each equation by taking square roots.

19) $36p^2 - 1 = 99$

20) $5b^2 + 7 = 97$