

## Eighth Set of Homework for Math 05

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**Please note:** You should fully justify your answers.

### Solving Linear Inequalities

1. Solve each of the following inequalities and sketch a graph of the solution.

(a)  $2x - 4 \leq 11$

(b)  $-3x + 2 > 9$

(c)  $5x - 2 < 3x - 8$

(d)  $\frac{3}{2}x - 5 \geq 7x + 2$

(e)  $-3(5x - 1) + 7 > -10x$

(f)  $2(x - 4) + 3x - 4 \leq 5x - 8$

(g)  $-5(x + 3) + 3x - 1 \geq 4(3x + 6) - 2x - 4$

(h)  $3(2x - 2) + 5 > 2(3x + 5) - 11$

(i)  $x - 5(2x + 1) \leq 6$

(j)  $3(2x - 1) + 4(3x + 5) > 2(x - 6)$

(k)  $\frac{x - 5}{3} - \frac{x}{6} + 2 \geq -\frac{3x - 1}{2} + 3x$