

Algebra II, Block G
September 26, 2011
Equalities and Inequalities, Part II

1. **Equalities and Inequalities in Two Dimensions** Graph the following equalities and inequalities on a coordinate plane (on a separate piece of graph paper). Identify a point (x, y) that satisfies each (in)equality.

(a) $y > 3$

(b) $x < 2$ and $y > -1$

(c) $(x > 4 \text{ or } x \leq -1)$ and $(y > 0 \text{ and } y < 2)$

(d) $(x > 4 \text{ or } x \leq -1)$ or $(y > 0 \text{ and } y < 2)$

(e) $y = x$

(f) $y \geq x$

(g) $y \leq 3x - 4$

(h) $y \leq 3x - 4$ and $y < -2x + 1$

(i) $y < -\frac{3}{4}x + 1$ and $y > -\frac{3}{4}x + 4$

(j) $y + 2 = \frac{3}{2}x$ and $y > 2x + 1$

(k) $x \geq -2y + 5$ and $y < 3$

(l) $y > \frac{4}{7}x - 3$ and $x < 2y$ and $4x + 1 \leq 3y + 2$