

Graphing Linear Inequalities

Quality – Accuracy – Transfer – 100%

Section 1. More algebraic inequalities on the number line provided. Learn by doing. For each exercise, perform the “POINT TEST” as your check.

****Special Case**** Betweenness

1. $-2 < x - 3 \leq 5$ < -----|-----|-----|-----|-----|-----|-----|-----|-----|----->
-2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8

2. $18 \geq -3x + 6$ < -----|-----|-----|-----|-----|-----|-----|-----|-----|----->
-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

Remembering:

Section 2. Graphing Linear Inequalities on the Cartesian Planes.

The Good News: _____

1. Re-Arrange and Simlify the Following Linear Inequalities.

The Bad News: _____

a. $2x + y > 5$ Re-Write _____ Simplify: _____ m = ____ b = ____

b. $y - 4x \leq 7$ Re-Write _____ Simplify: _____ m = ____ b = ____

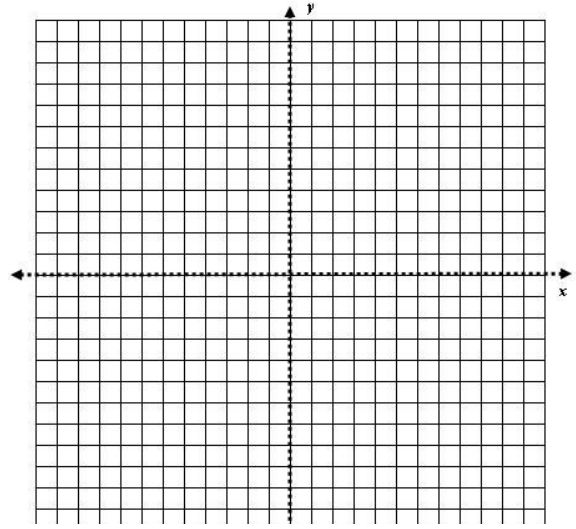
c. $2y + 4x - 6 > 0$ Re-Write _____ Simplify: _____ m = ____ b = ____

d. $3x - y > 5$ Re-Write _____ Simplify: _____ m = ____ b = ____

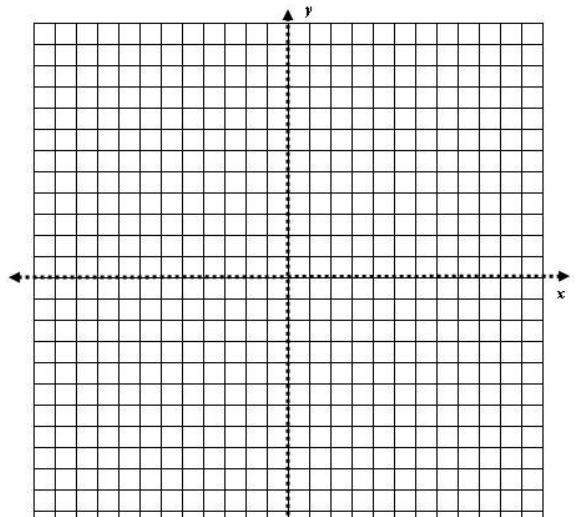
e. $9 \leq 2x - 3y$ Re-Write _____ Simplify: _____ m = ____ b = ____

Section 3. Graphing Linear Inequalities on the Cartesian Plane – In Two Variables

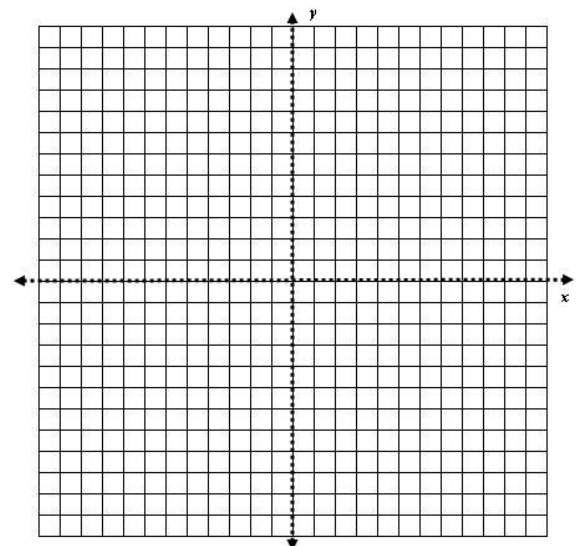
1. $x > 4$



2. $y \leq 5$

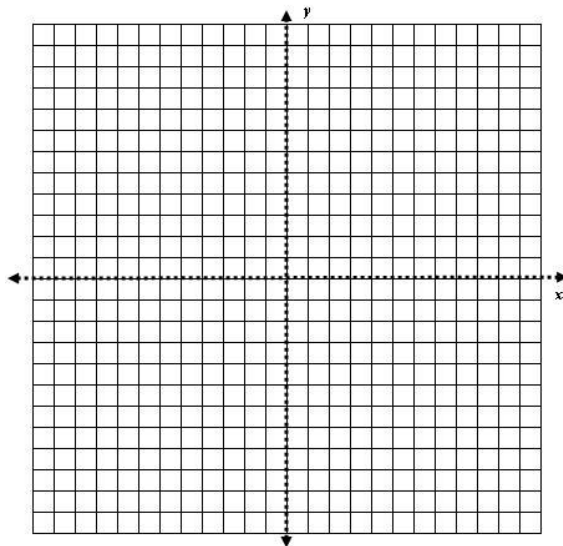


3. $y \leq 2x$

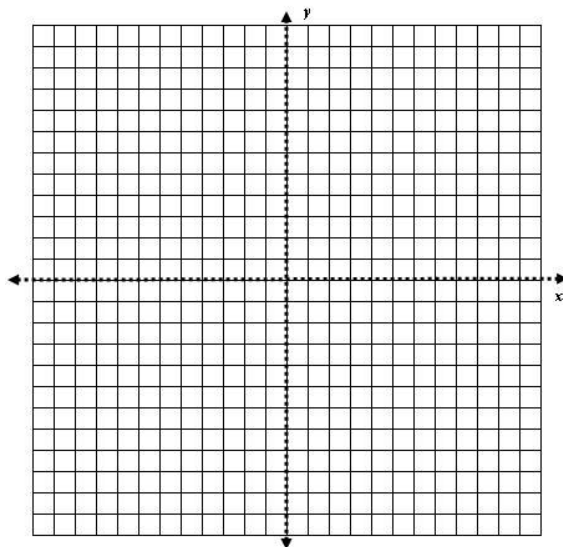


Special Case: Betweeness

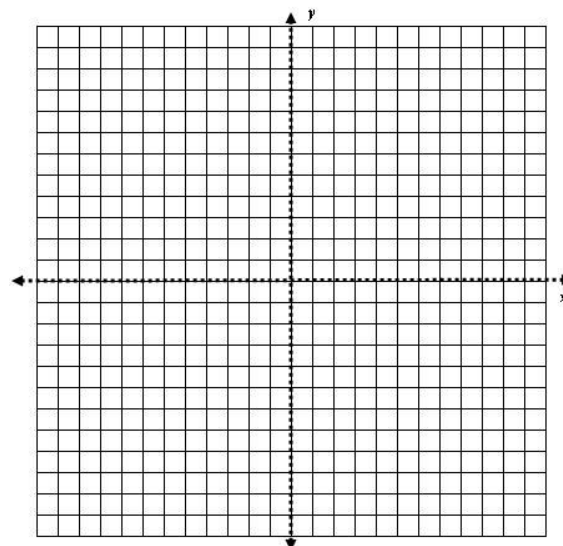
4. $x + y < 4$



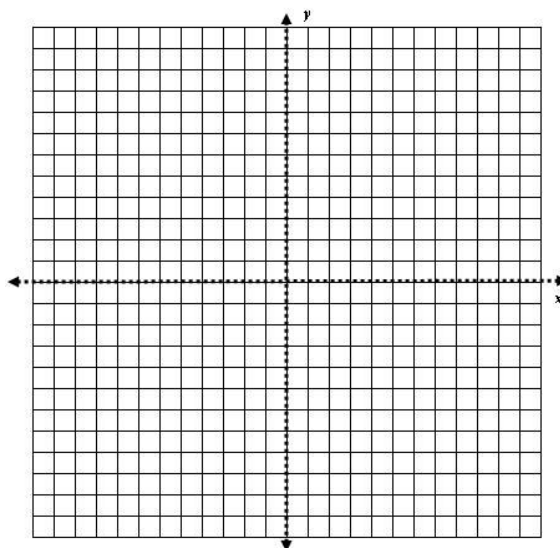
5. $y - x \geq 5$



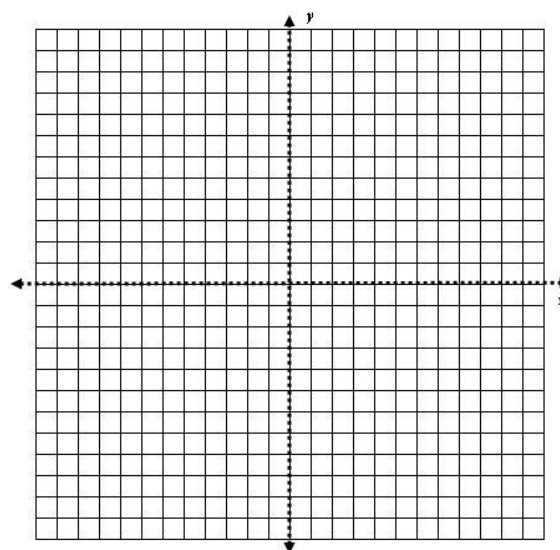
6. $y - 3x > 3$



7. $x - 2y \leq 4$

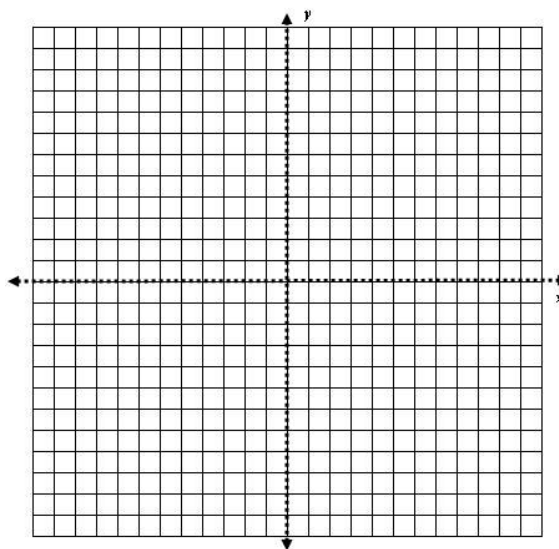


8. $6 \leq 2x - 3y$

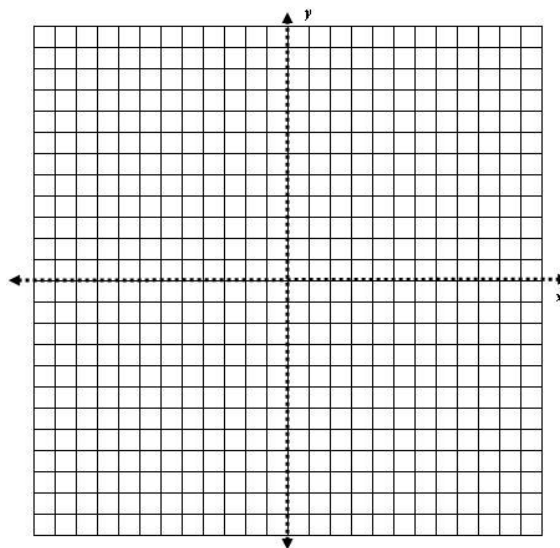


Section 4. Systems of Linear Inequalities (1) Draw your boundary lines, and plan your shading, (2) Shade your $\frac{1}{2}$ plane Solutions.

1.
$$y \geq -\frac{2}{3}x + 1$$
$$y > -4$$



2.
$$3x + 2y > 8$$
$$x - 5y < 5$$



Homework Section

Section	Page(s)	Problems(s)
10.3	660	7 → 27 Odd, 29 → 45 E.O.O.

Name _____
Date _____

MTH 098
Class #17

Systems of Linear Equations – in 2 Variables

Quality – Accuracy – Transfer – 100%

1. Six boxes of oranges and five boxes of grapefruits cost \$61. At the same time and place, 3 boxes of oranges and 2 boxes of grapefruits cost \$28. Find the cost of one box of each.

2. The Perimeter of a rectangle is 28 feet. Three times the length increased by 4 times the width is 48 feet. Find the dimensions of the rectangle.

3. Bianca has \$5.70 in quarters and dimes. The number of quarters is 6 more than the number of dimes. How many coins of each type does she have?