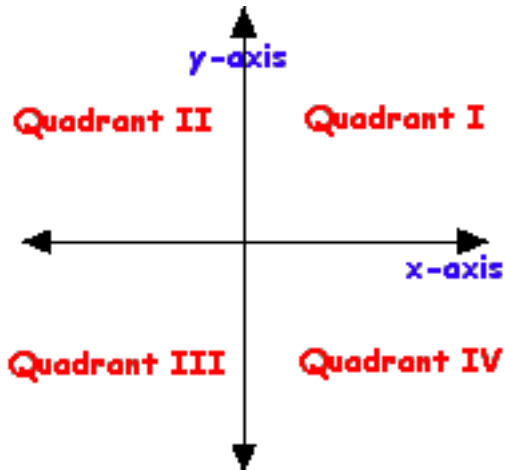


Name: _____

Lesson 6.7 – Set Notation

Definitions:

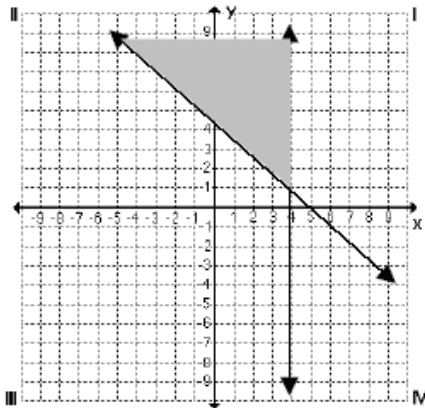
Quadrant



Domain: _____

Range: _____

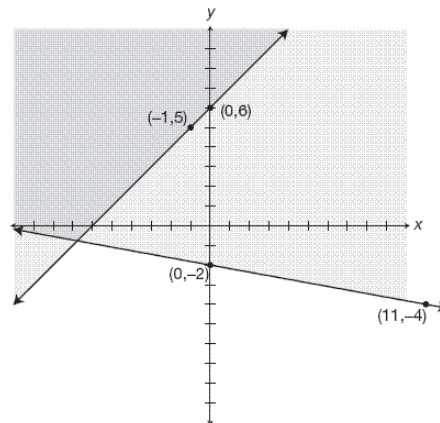
Example #1



D:

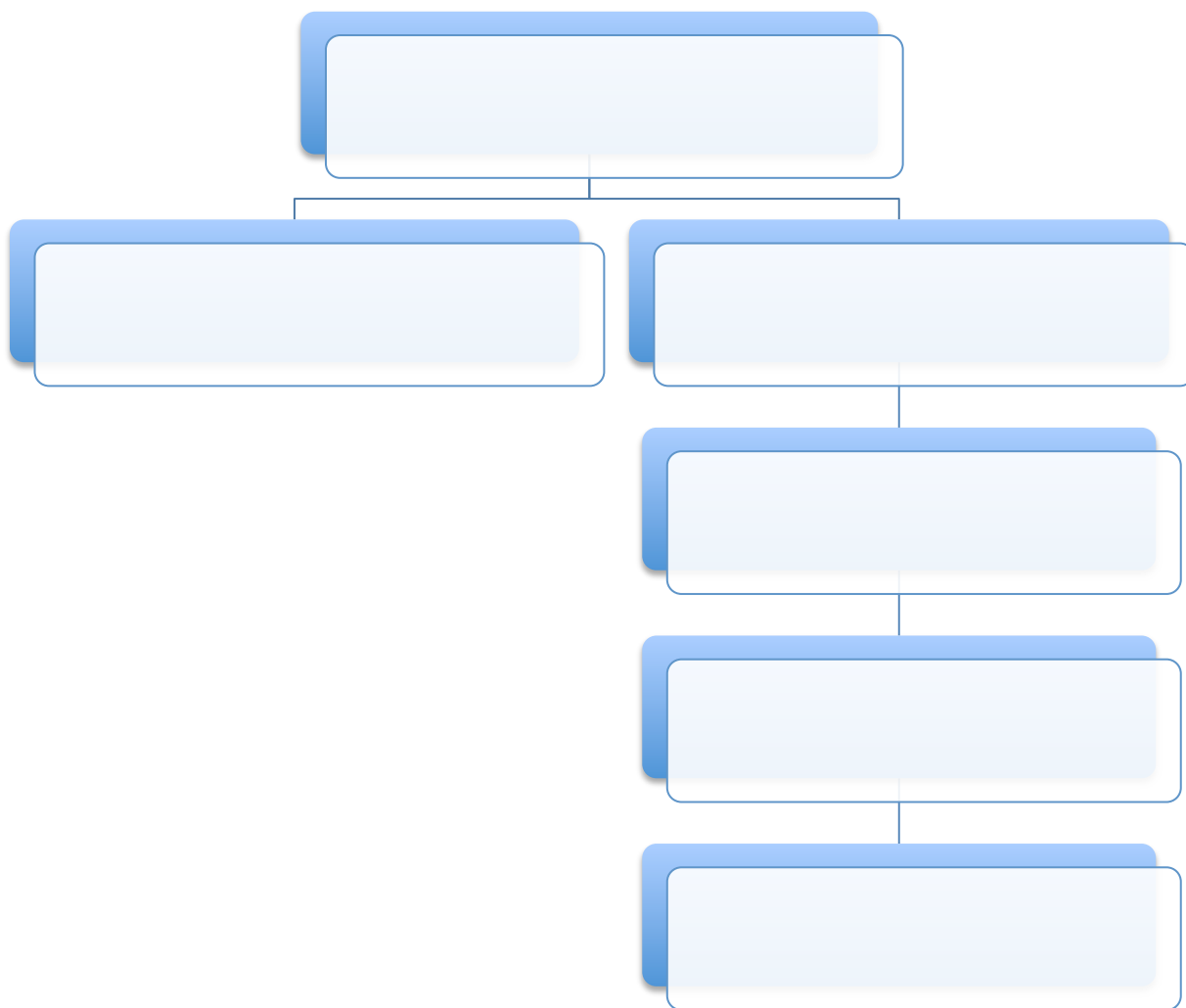
R:

Example #2

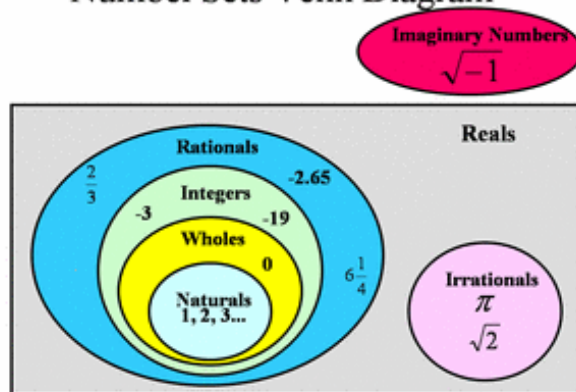


D:

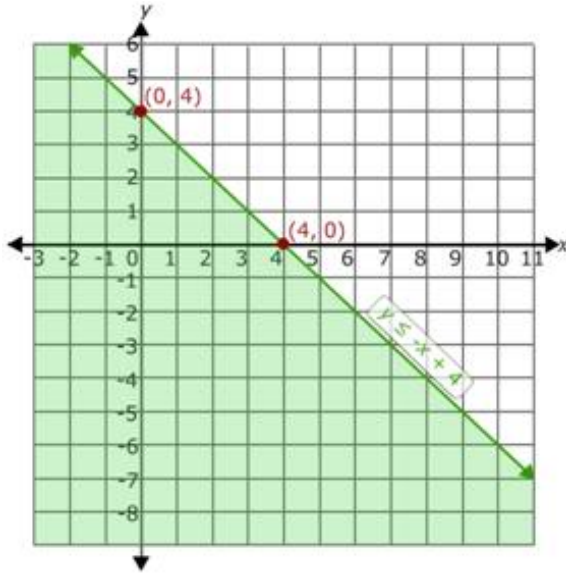
R:



Number Sets Venn Diagram

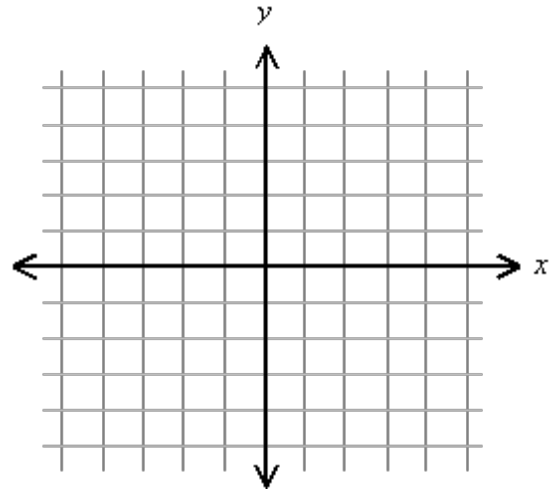


$$y \leq -x + 4$$



$$y > -x + 4$$

(but x and y are integers)



Set Notation

{ =

| =

∈ =

Example:

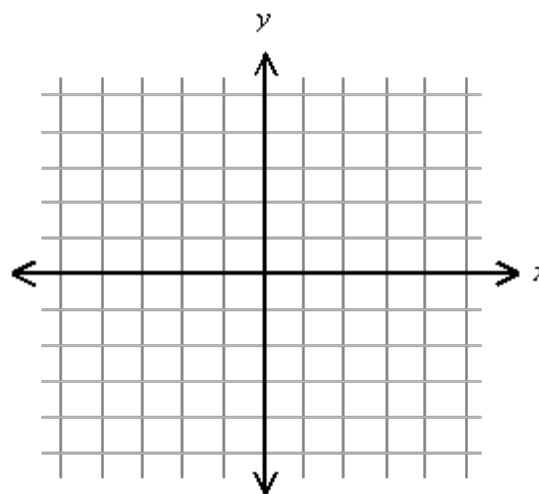
$$\{(x, y) | y > -2x + 1, x \in R, y \in R\}$$

“The _____ of all (x, y) coordinates _____ $y > -2x + 1$

x is an _____ of the _____ numbers and

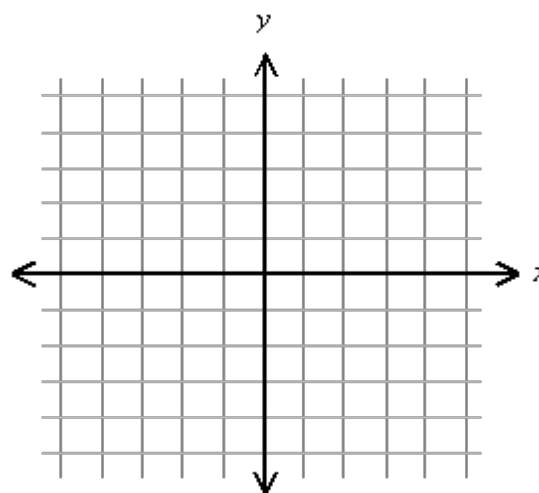
y is an _____ of the _____ numbers.”

Example #1: Graph the solution for $\{(x, y) | y > -2x + 1, x \in R, y \in R\}$



D: _____
R: _____

Example #2: Graph the solution for $\{(x, y) | 2y + 4 \leq 3x, x \in I, y \in I\}$



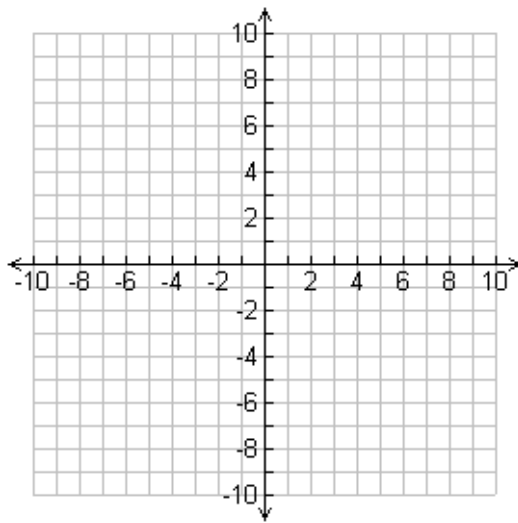
D: _____
R: _____

Name: _____

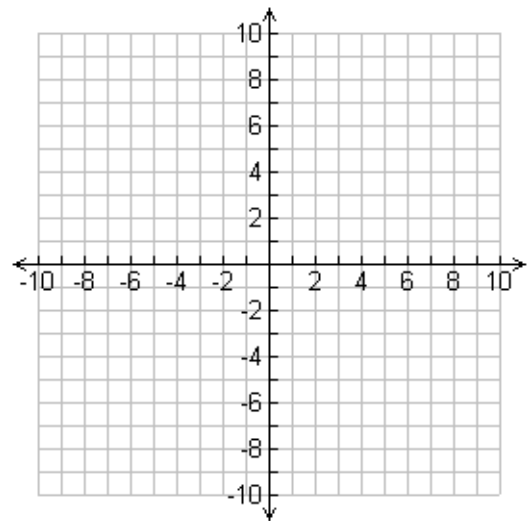
6.7 Assignment

Graph the solution set for each linear inequality

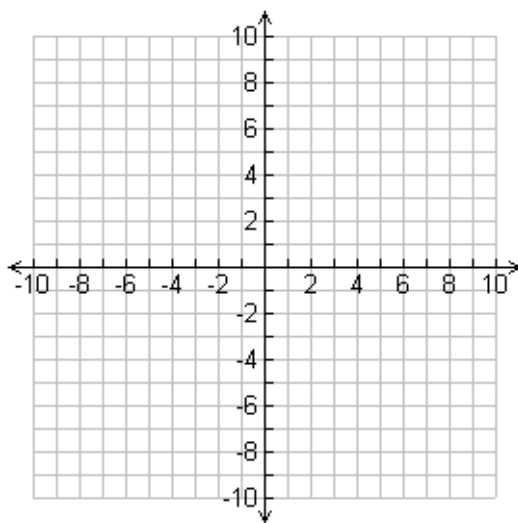
1) $\{(x, y) | y > -2x + 8, x \in R, y \in R\}$



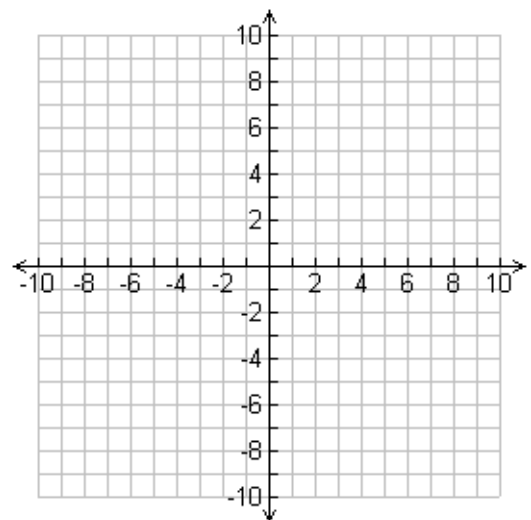
2) $\{(x, y) | -3y \leq 9x + 12, x \in I, y \in I\}$



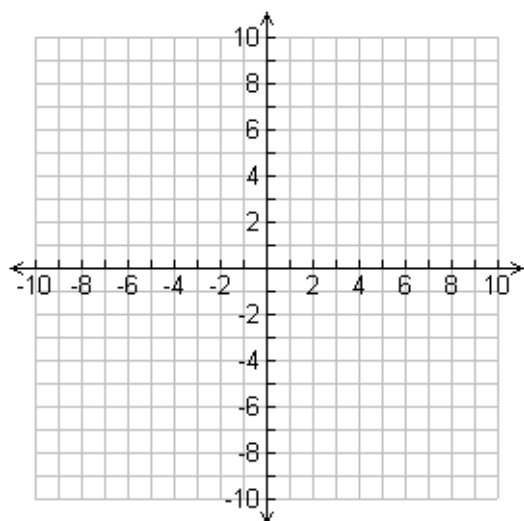
3) $\{(x, y) | 4x + 3y \geq -12, x \in W, y \in W\}$



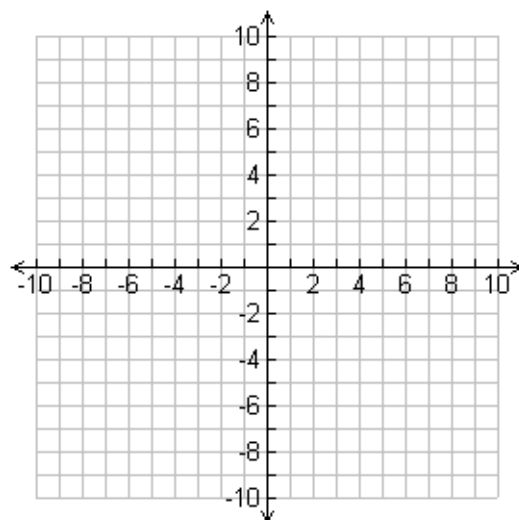
4) $\{(x, y) | -4x - 8 > 4, x \in R, y \in R\}$



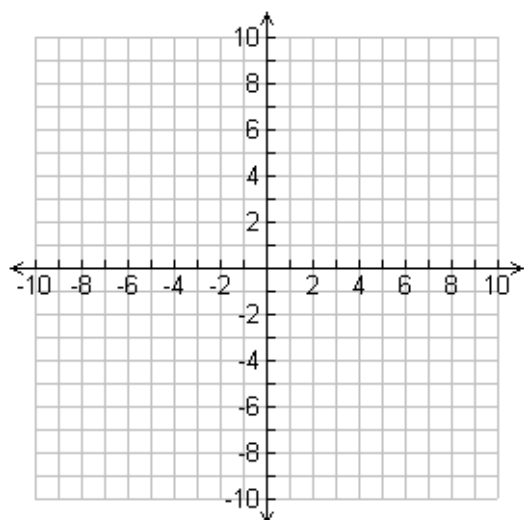
5) $\{(x, y) | 2x - y \geq 5y + 2x + 12, x \in W, y \in W\}$



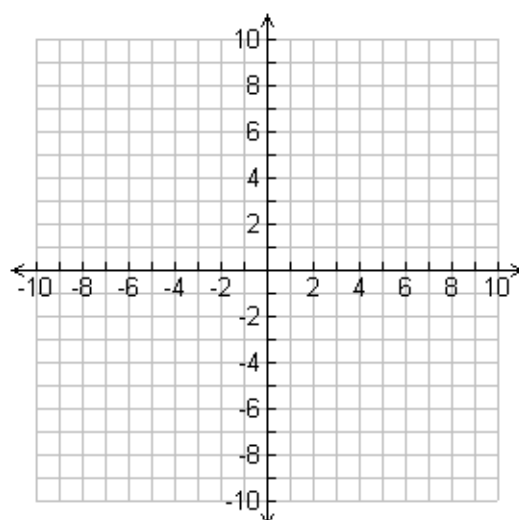
6) $\{(x, y) | x + 6y - 14 < 0, x \in I, y \in I\}$



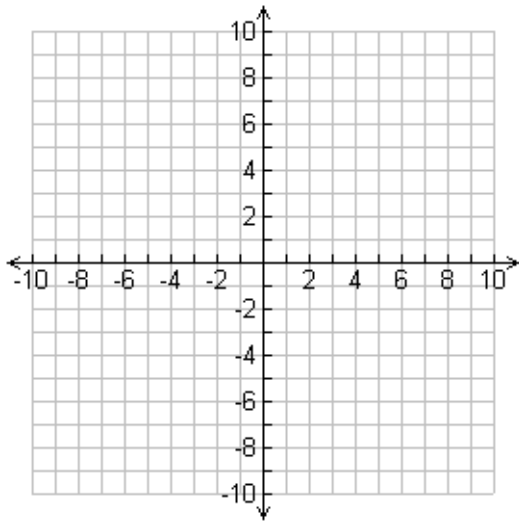
7) $\{(x, y) | 5x - y \leq 4, x \in W, y \in W\}$



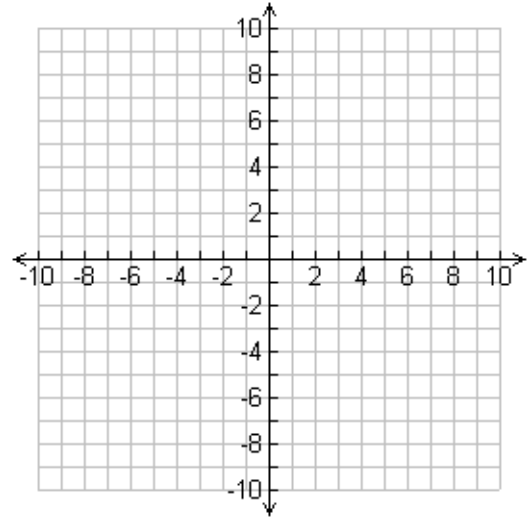
8) $\{(x, y) | 2x + 2 \leq 5 + x, x \in I, y \in I\}$



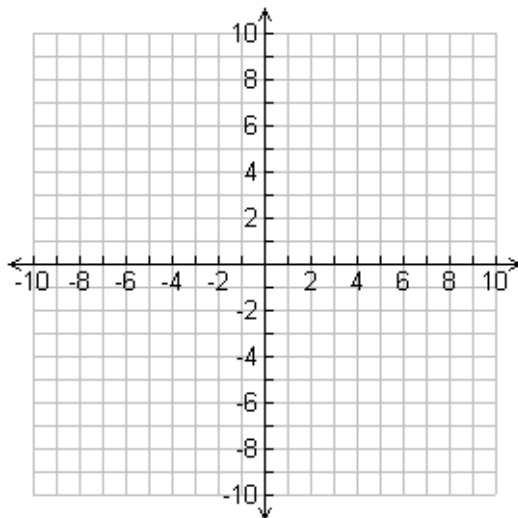
9) $\{(x, y) | -2y > 20, x \in R, y \in R\}$



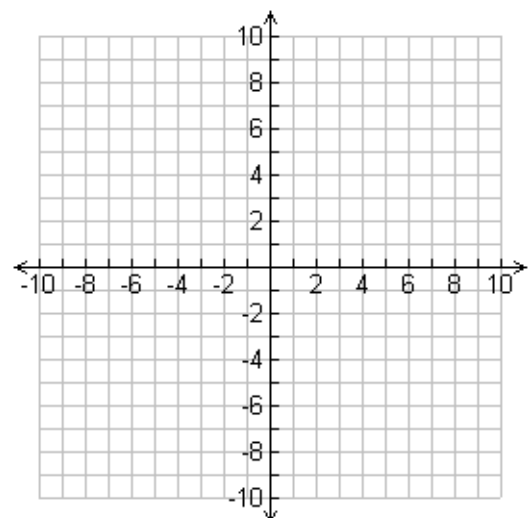
10) $\{(x, y) | 4x - 5y < 10, x \in R, y \in R\}$



11) $\{(x, y) | -x + 2y \geq -4, x \in R, y \in R\}$
 $\{(x, y) | y \geq x, x \in R, y \in R\}$

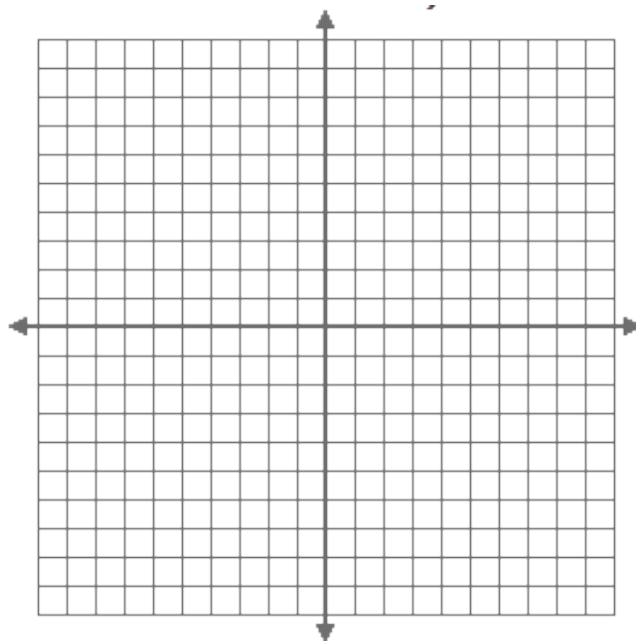


12) $\{(x, y) | 2x + 3y \leq 9, x \in I, y \in I\}$
 $\{(x, y) | y - 6x \geq 1, x \in I, y \in I\}$



Practice Quiz

1) $\{(x, y) \mid y + 3 > 2x, x \in \mathbf{R}, y \in \mathbf{R}\}$



2) $\{(x, y) \mid y \leq -\frac{3}{2}x - 4, x \in \mathbf{I}, y \in \mathbf{I}\}$

