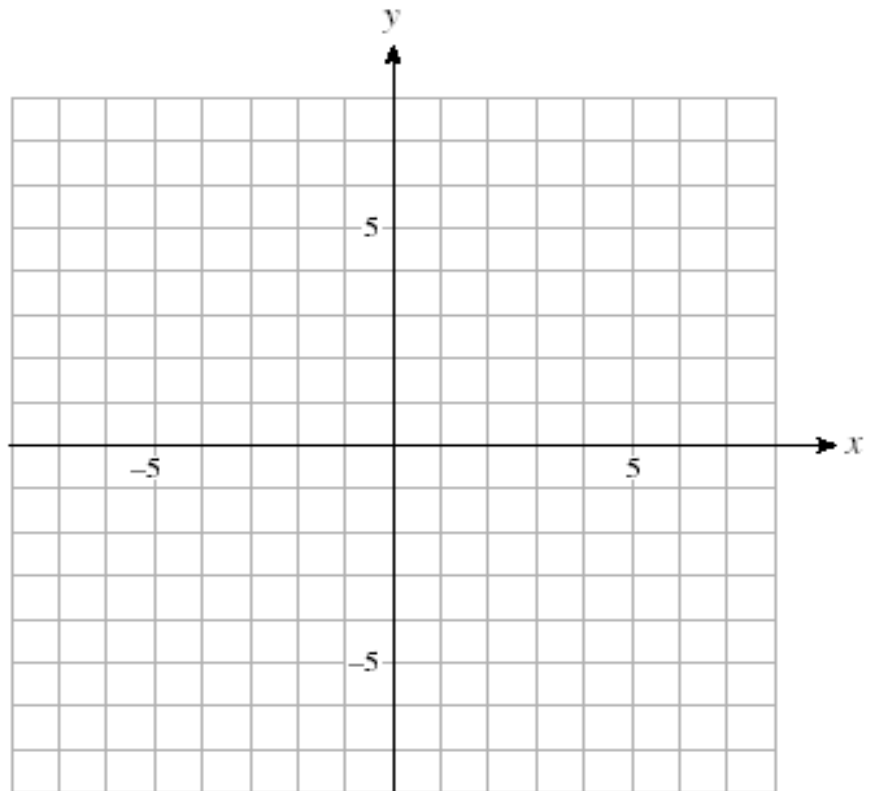Name: _____   Date: _____
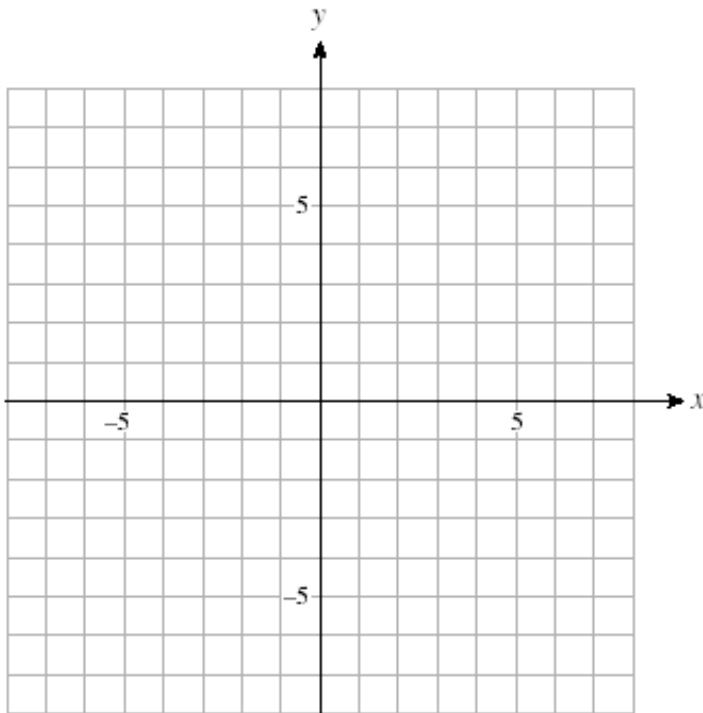
Warmup Graph the solution to
$$y > \frac{2}{5}x - 3$$

Recall Number sets:

a. Natural Numbers

b. Whole Numbers

c. Integers

d. Real Numbers

Example Graph each of the following inequalities:

a. $\{(x,y)|x + 5 < 0, x \in \mathbb{W}, y \in \mathbb{W}\}$ b. $\{(x,y)|y \geq -2x + 5, x \in \mathbb{Z}, y \in \mathbb{Z}\}$

Example Sam has $30 to buy snacks for his class. Apples cost $0.75 each and muffins are $1.25.

     a. Define the variables and write a linear equation to represent the possible combinations of snacks
         that he can purchase.

     b. Are there any restrictions on the variables? Explain.

     c. Graph your equation and shade the solution region.