Pre-Algebra
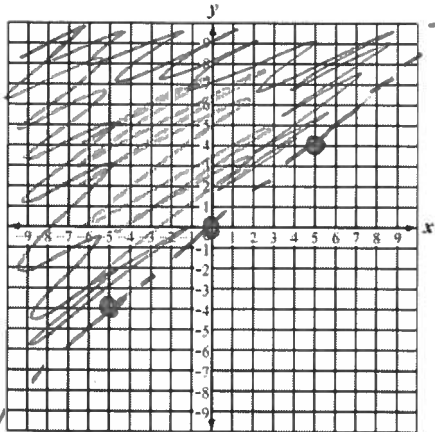**U7L6 (8-8) Practice**

Name: _Ken_

1. Graph each inequality. Solve for y if not already in slope-intercept form.

a) $y < \dfrac{4}{5}x$
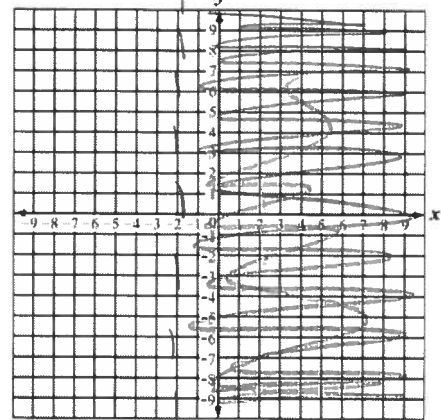
$2 < \dfrac{4}{5}(5)$

$2 < 4$ true
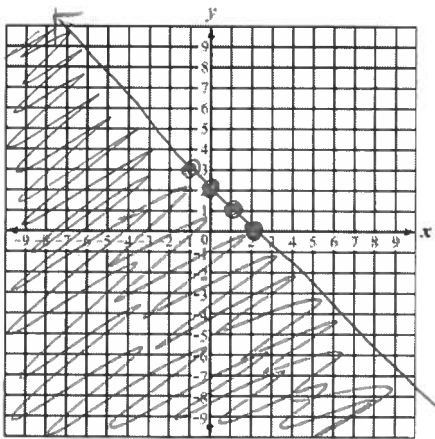

b) $x > -2$ vertical

c) $x + y \le 2$
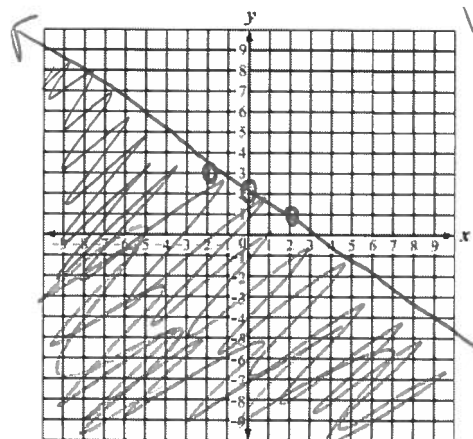
$y \le -x + 2$

$0 \le 2$
true

d) $-x - 2y \ge -4$

$-2y \ge x - 4$

$y \le -\dfrac{1}{2}x + 2$

$0 \le 2$
true

2. Is the origin a solution to the inequality in part a? Why or why not?

(0,0)

no   on dashed line

3. Is (2, 0) a solution to the inequality in part c? Why or why not?

yes   on solid line

4. Is (9, 8) a solution to part d? Why or why not?
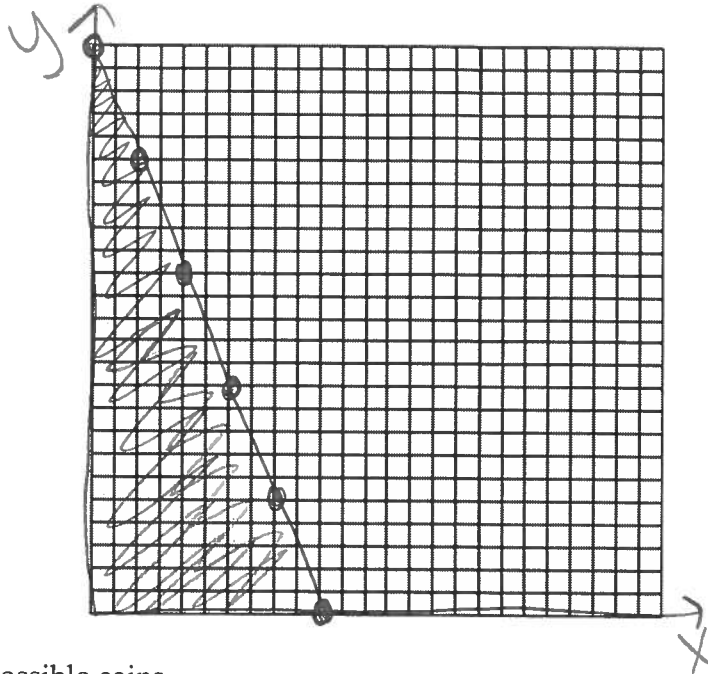
no   not in shaded region

5. You have a jar of quarters and dimes. You know the total value is no more than $2.50 ~~$10.50~~. Write an inequality where x = number of quarters and y = number of dimes. Then graph your inequality (make sure to put into slope-intercept form first).

$x \rightarrow \#$ quarters
$y \rightarrow \#$ dimes

$25x + 10y \le 250$

$10y \le -25x + 250$

$y \le -\frac{5}{2}x + 25$

a. Give two different combinations of possible coins.

Sample: $(6, 10)$ 6 quarters + 10 dimes
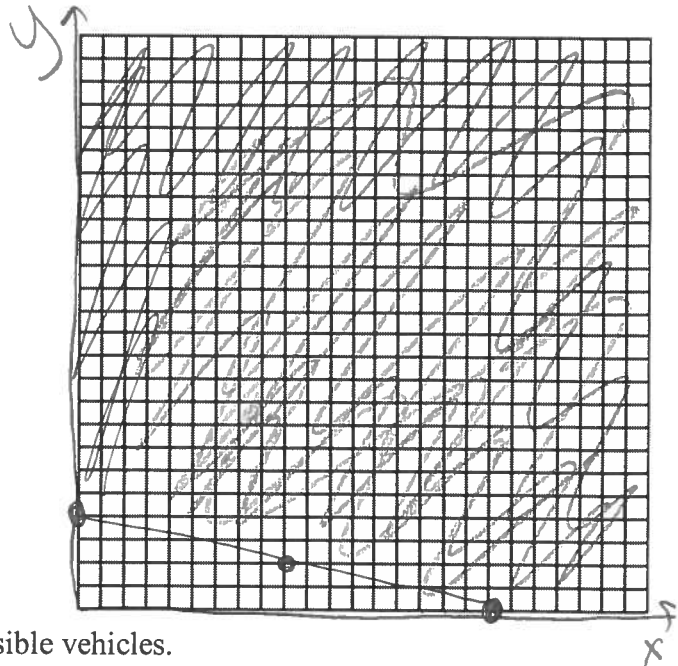$(2, 5)$ 2 quarters + 5 dimes

6. There are cars and 18 wheel trucks in a parking lot. There are at least 72 total wheels in the parking lot. Write an inequality where x = number of cars and y = number of trucks. Then graph your inequality (make sure to put into slope-intercept form first).

$x \rightarrow \#$ cars $\begin{pmatrix} 4 \text{ wheels} \\ 18 \text{ wheels} \end{pmatrix}$
$y \rightarrow \#$ trucks

$4x + 18y \ge 72$

$18y \ge -4x + 72$

$y \ge -\frac{2}{9}x + 4$

a. Give two different combinations of possible vehicles.

$(9, 2)$ 9 cars + 2 trucks
Sample: $(10, 10)$ 10 cars + 10 trucks