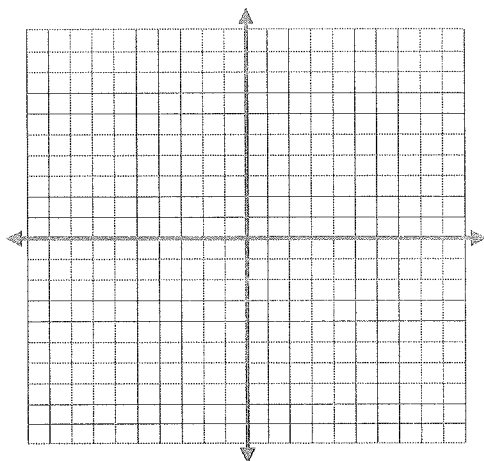Solve the system of linear inequalities by graphing. Identify three solutions and one non-solution.
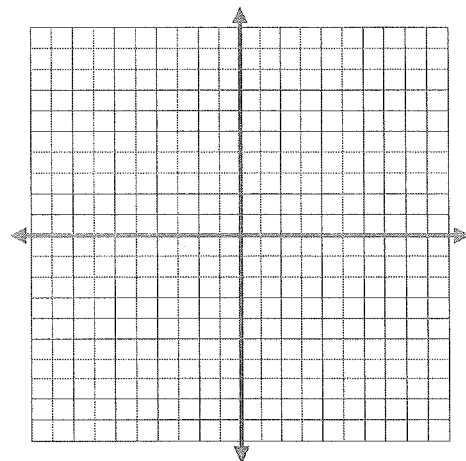
1) $\begin{cases} y < -3x + 4 \\ y > 2x - 2 \end{cases}$
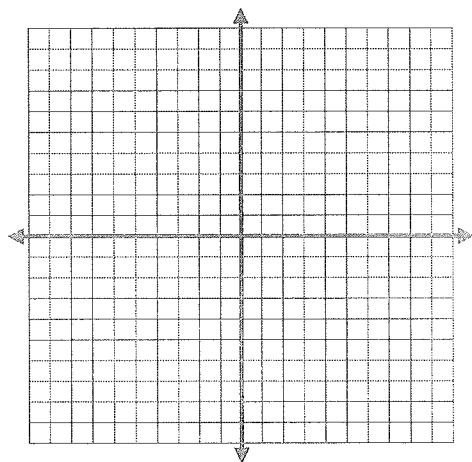
Identify three solutions:

Identify one non-solution:

2) $\begin{cases} y < \dfrac{4}{3}x + 1 \\ y \geq -\dfrac{2}{3}x + 7 \end{cases}$

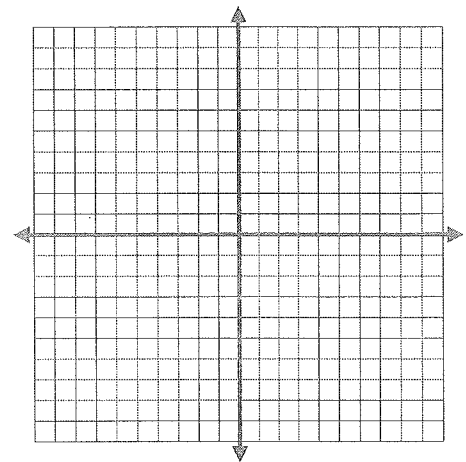Identify three solutions:

Identify one non-solution:

3) $\begin{cases} y \leq \dfrac{1}{4}x + 2 \\ y > 1 \end{cases}$
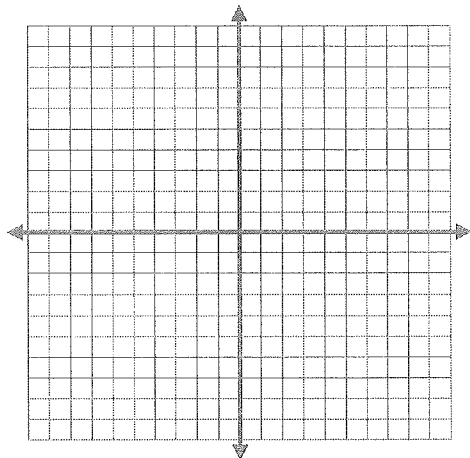
Identify three solutions:

Identify one non-solution:

4) $\begin{cases} 2y > x + 4 \\ y \leq x \end{cases}$
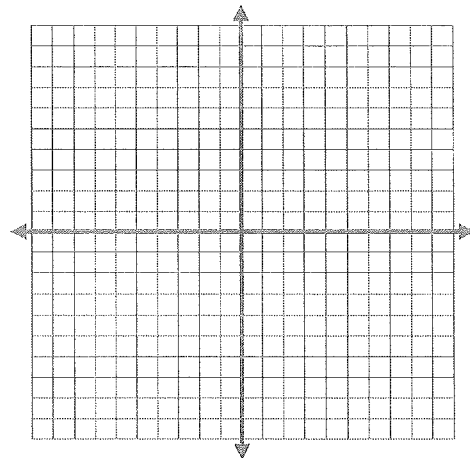
Identify three solutions:

Identify one non-solution:

5) $\begin{cases} -y > x - 3 \\ y + 4x < 6 \end{cases}$

Identify <u>three solutions</u>:

Identify <u>one non-solution</u>:

6) $\begin{cases} 3y - x > 6 \\ 2y < 2x \end{cases}$
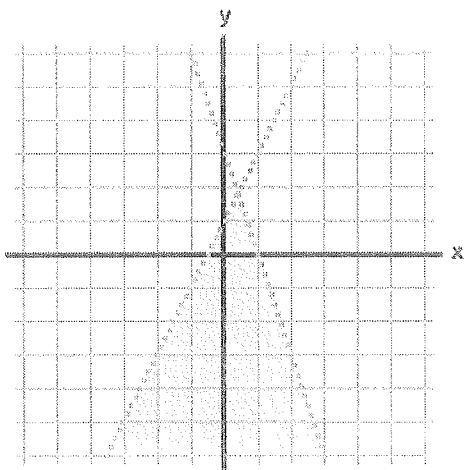
Identify <u>three solutions</u>:

Identify <u>one non-solution</u>:

Write the system of linear inequalities shown below. Identify three solutions and one non-solution.
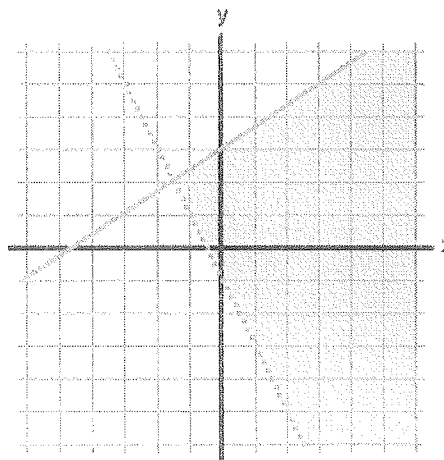
7)

Write the system shown above:

Identify <u>three solutions</u>:
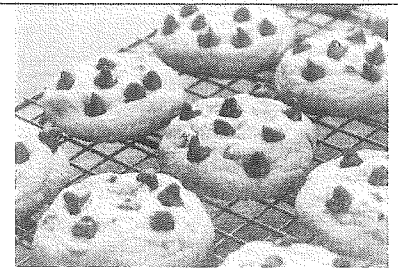
Identify <u>one non-solution</u>:

8)

Write the system shown above:

Identify <u>three solutions</u>:

Identify <u>one non-solution</u>:

9) For the bake sale on Saturday Tillie is making cookies and brownies. She is selling her cookies for $1 each and brownies for $2 each. She wants to make at least $30, but doesn't want to make more than 4 dozen cookies/cupcakes combined. (*Hint – how many are in a dozen?)
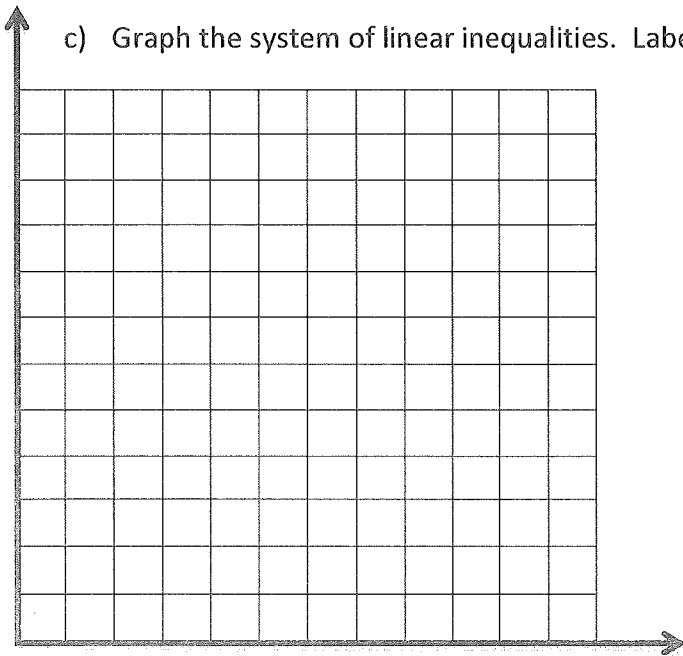
a) Identify your variables.

b) Write the system of linear inequalities that can be used to represent this situation.
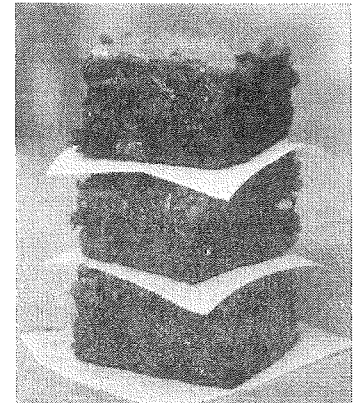
c) Graph the system of linear inequalities. Label your x- and y-axis.

d) Describe and list five possible combinations of cookies and brownies that Tillie could make.