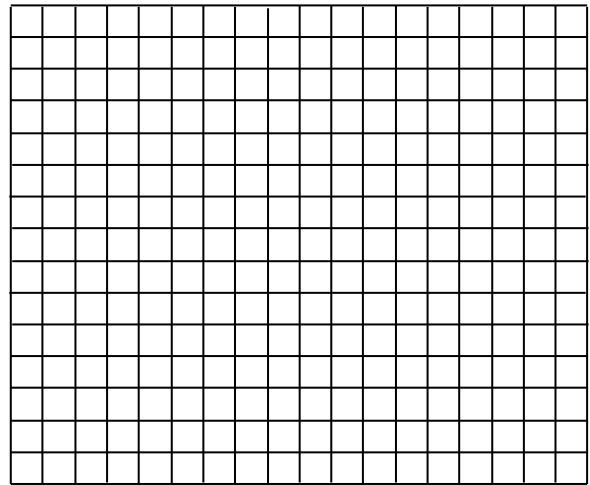




4. A chemist wants to mix a 16% acid solution and a 8% acid solution to make a 11% acid solution. How many cc's of each solution must be mixed to make 320 cc of the 11% solution? Answer in a complete sentence.

5. Solve the following linear inequality in 2 variables. Make sure to graph the boundary line using 3 labeled ordered pairs and show the work for a check point above and below the boundary line. Don't forget to label the solution.

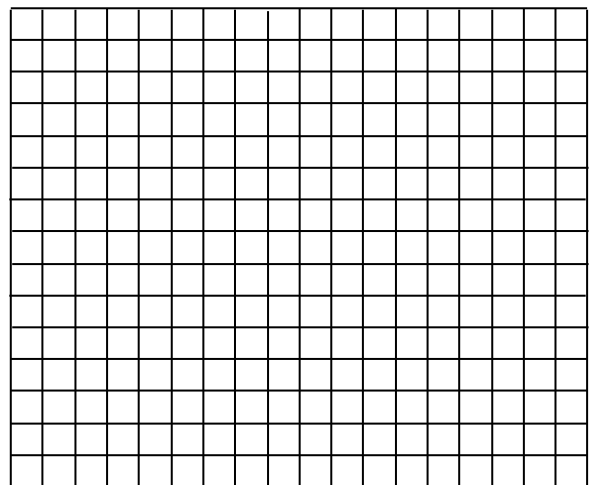
$$y - 2x < -3$$



6. Solve the following system of linear inequalities in 2 variables. Highlight the solution. Label the boundary lines. Use at least 3 labeled points to create boundary lines.

$$y - 2x < -3$$

$$x - y \leq 2$$



7. The average annual US per-person consumption of milk and soft drinks is shown in the table below for various years. Answer the questions that follow.

Years from 1950	Milk (gal per person)	Soft Drinks (gal per person)
0	36.4	10.8
10	32.6	13.4
20	29.8	24.3
30	26.5	35.1
40	24.3	46.2
50	22.6	49.3
55	21.0	51.5

- a) Use the y-intercept given in each case to create a model for the milk and soft drink consumption by hand. Circle the other point that you use to find the slope (average rate of change) for your models. Do show work for slope and each complete equation in slope-intercept form.
- b) Use your by-hand-model to find in approximately what year the milk and soft drink consumption, in gallons per year, will be the same. Solve using substitution or elimination. *Remember the answer is not the actual year!*