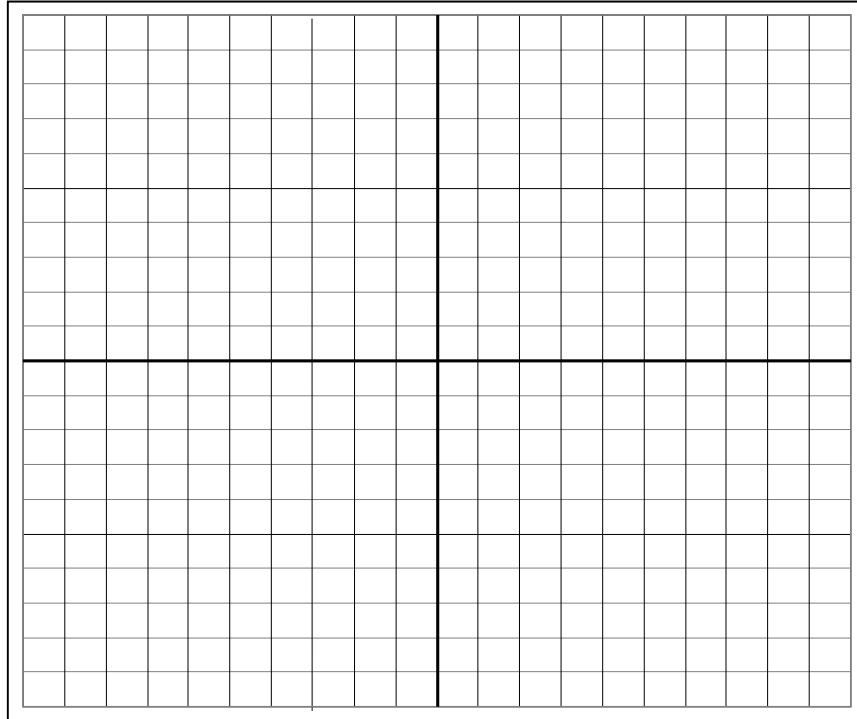


NAME \_\_\_\_\_

SCORE: \_\_\_\_\_/20

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1. Graph  $4x + 3y \geq 48$ . Your graph must include:
- A. The coordinates of the y-intercept.
  - B. The coordinates of the x-intercept.
  - C. The appropriate shading for the inequality.



2. A special diet for a farm animal is to contain at most 150 units of protein. Each gram of Food A contains 6 units of protein and each gram of Food B contains 7 units of protein. How many grams of each type of food should the farmer mix so that the animal gets at most 150 units of protein?

Let  $x = \#$  of grams of food A and  $y = \#$  of grams of food B.

Write a linear inequality for the protein requirement.

2) Graph & **LABEL** the feasible region for the following system of equations:

Be sure to include **ALL** of the following:

- A. Label each of the 4 lines with its equation.
- B. Clearly shade the inequalities.
- C. Darken the boundary lines of the feasible region.
- D. Draw a big dark dot on the corner points of the feasible region.
- E. Write the label "F R" in the feasible region.
- F. State whether the feasible region is bounded or unbounded.

$$\begin{aligned}3x + y &\geq 12 \\2x + 2y &\geq 16 \\x &\geq 0 \\y &\geq 0\end{aligned}$$

