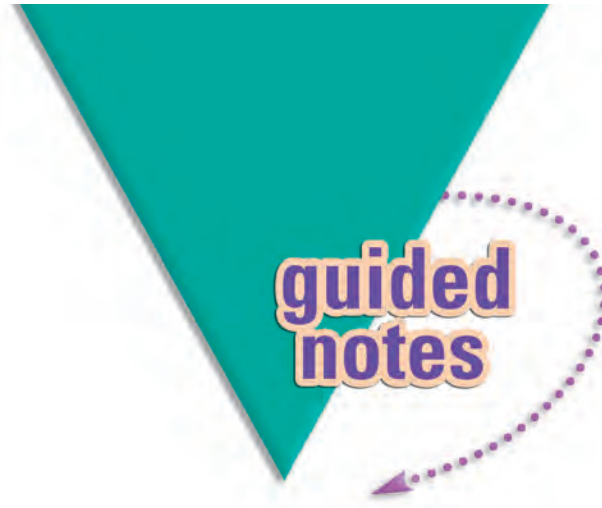


NAME _____

Module 7 Solving Linear Equations and Inequalities of Two Variables
Lesson 4 Solving Consumer/Business Problems Using Linear Equations and Inequalities of Two Variables



guided notes

Lesson Objectives

- Write and solve linear equations of two variables to find solutions to business/consumer problems.
- Write and solve inequalities of two variables to find solutions to business/consumer problems.

When solving business or consumer problems, make sure to define the **variables** _____.

- 1 Newt spent a total of \$12.00 on items at the concession stand. He bought candied ants for \$1.00 per bag and grilled grubs for \$2.00 each. If Newt bought 4 bags of candied ants, how many grilled grubs did he buy?

Newt bought 4 grilled grubs.

- 2 The SAT raw score is calculated by awarding one point for each correct answers and penalizing the student $\frac{1}{4}$ point for each incorrect answer. If a student's raw score is $40\frac{3}{4}$ and the student answered 42 questions correctly, how many questions did the student answer incorrectly?

The student answered 5 questions incorrectly.

- 3 The gym charges a membership fee of \$75 and a monthly fee of \$20. Write an inequality that shows the relationship between the maximum amount Newt has available to spend, s , and the cost of being a member of the gym for m months. **$s \geq \$20m + \75**

4 Use the inequality from question 3 to determine the maximum number of months Newt can be a member of Golden Gym if the most he can spend is \$210. six months

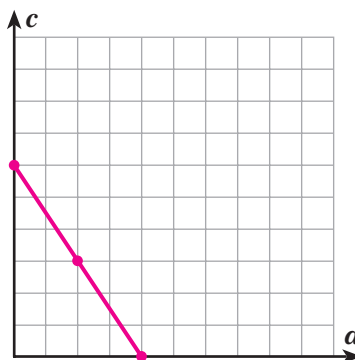
5 The Boudreaux family went to the movies and spent \$24 on tickets. The cost of an adult's ticket was \$6, while the cost of a child's ticket was \$4. Find all the possible combinations of adults and children in the Boudreaux family who went to the movies.

$$6a + 4c = 24$$

(4, 0) 4 adults and 0 children

(2, 3) 2 adults and 3 children

(0, 6) 0 adults and 6 children



When using a graph to solve a problem, for which a sensible solution requires whole numbers only, look for points on the line that are located where the horizontal and vertical grid lines cross. Those points will have whole number coordinates.