Assignment

Name _____ Date _____

Finding the Better Paying Job
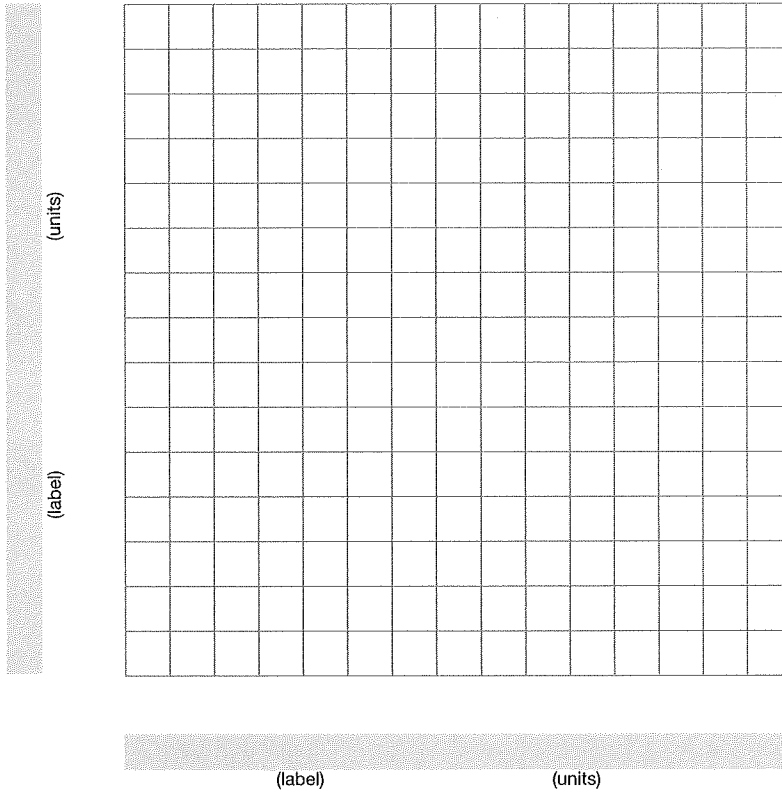## Using the Best Method to Solve a Linear System, Part 1

You are offered two different summer jobs and you need to decide which one will pay the most money. The first job, a camp counselor position, pays $200 up front plus $7 per hour. The second job, a cashier position at a sporting goods store, pays $10 per hour.

1. Write an equation that gives the total earnings from the counselor position in dollars in terms of the time worked in hours. Be sure to define your variables. Use a complete sentence in your answer.

2. Write an equation that gives the total earnings from the cashier position in dollars in terms of the time worked in hours. Be sure to define your variables. Use a complete sentence in your answer.

3. Use an algebraic method to determine whether the total earnings from the counselor position will ever be the same as the total earnings from the cashier position. Show all your work and use a complete sentence in your answer.

4. If the total earnings will be the same, what will the total earnings be? Show all your work and use a complete sentence in your answer.

5. Which method did you use to find the answer to Question 3? Use a complete sentence to explain your choice.

6. Check your solution by creating a graph of your linear system on the grid below. First, choose your bounds and intervals. Be sure to label your graph clearly.

Variable quantity	Lower bound	Upper bound	Interval
Time worked			
Total earnings			

(units)

(label)

(label)   (units)

7. Write a short paragraph explaining which job is the better choice. Use the information from the linear system and the graph to support your decision.