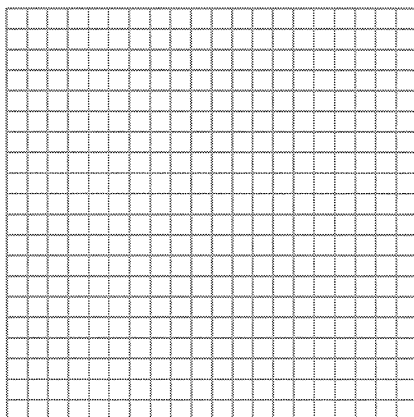


Name \_\_\_\_\_ Date \_\_\_\_\_

### The Playoffs Graphing Inequalities

1. Jeremy is working at two jobs to save money for his college education. He makes \$8 per hour working for his uncle at Pizza Pie busing tables and \$10 per hour tutoring peers after school in math. His goal is to make \$160 per week.
  - a. If Jeremy works 8 hours at Pizza Pie and tutors 11 hours during the week, does he reach his goal?
  
  
  
  
  
  
  
  
  
  
  - b. Write an expression to represent the total amount of money Jeremy makes in a week from working both jobs. Let  $x$  represent the number of hours he works at Pizza Pie and  $y$  represent the number of hours he tutors.
  
  
  
  
  
  
  
  
  
  
  - c. After researching the costs of colleges, Jeremy decides he needs to make more than \$160 each week. Write an inequality in two variables to represent the amount of money Jeremy needs to make.
  
  
  
  
  
  
  
  
  
  
  - d. Graph the inequality from part (c).



- e. Is the point  $(0, 0)$  in the shaded region of the graph? Explain why or why not.
- f. According to the graph, if Jeremy works 5 hours at Pizza Pie and tutors for 10 hours, will he make more than \$160? Explain.
- g. Due to days off from school, Jeremy will only be tutoring for 6 hours this week. Use the graph to determine the least amount of full hours he must work at Pizza Pie to still reach his goal. Then show that your result satisfies the inequality.

