**2.6 Assignment Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Hot Shirts**

**Using Tables, Graphs, and Equations, Part 2**

 **1.** Great Freights, a local shipping company, bases its charges on the weight of the items being shipped. In addition to charging $0.40 per pound, Great Freights also charges a one-time fee of $10 to set up a customer’s account.

**a.** How much does Great Freights charge a new customer to ship a package that weighs 20 pounds?

**b.** How much does Great Freights charge a new customer to ship a package that weighs 50 pounds?

**c.** Estimate the weight of a package if Great Freights charges a new customer $45 to ship the package.

**d.** Write an algebraic equation for the problem situation.

 **2.** Twin brothers, Mike and Mark, are looking for a week-long winter break job. They are both offered jobs at grocery stores. Mike is offered a job at Fresh Foods making $10 per hour. Mark is offered a job at Groovy Groceries making $8 an hour, plus a one-time hiring bonus of $100. Each twin believes that he has been offered the better job.

**a.** How much does Mike earn at Fresh Foods if he works 20 hours? 40 hours? 60 hours? Show your work.

**b.** Explain how you determined Mike’s earnings in part (a).

**c.** How much does Mark earn at Groovy Groceries if he works 20 hours? 40 hours? 60 hours? Show your work.

**d.** Explain how you determined Mark’s earnings in part (c).

**e.** Complete the table using the data and your answers from parts (a) and (c).

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity Name** | **Time Worked****(in hours)** | **Mike’s Earnings at Fresh Foods****(in dollars)** | **Mark’s Earnings at Groovy****Groceries****(in dollars)** |
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|  |  |  |  |
|  |  |  |  |
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**f.** Create a graph of the data in the table in part (e). First, choose your bounds and intervals. Remember to label your graph clearly and name your graph.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable Quantity** | **Lower Bound** | **Upper Bound** | **Interval** |
| Time Worked |  |  |  |
| Earnings |  |  |  |



**g.** After how many hours will the twins earn the same amount of money? Explain your reasoning.

**h.** Whose job is better, Mike’s or Mark’s? Explain how you determined your answer.