Name:
Date:
Class:

Lesson 1.15:
Using Graphs to Represent Proportional Relationships

Sam's mother has entered a 10K race. Sam and his family want to show their support of their mother, but they need to figure out where they should go along the race course. They also need to determine how long it will take her to run the race so that they will know when to meet her at the finish line. Previously, his mother ran a 5K race with a time of $1\frac{1}{2}$ hours. Assume Sam's mother ran the same rate as the previous race in order to complete the chart.

Create a table that will show how far Sam's mother has run after each half hour from the start of the race, and graph it on the coordinate plane to the right.

| Time ($H$, in hours) | Distance Run ($D$, in km) |
|---|---|
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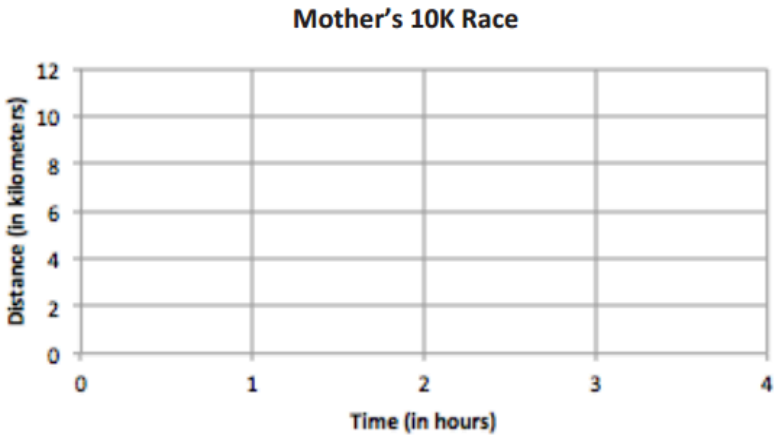


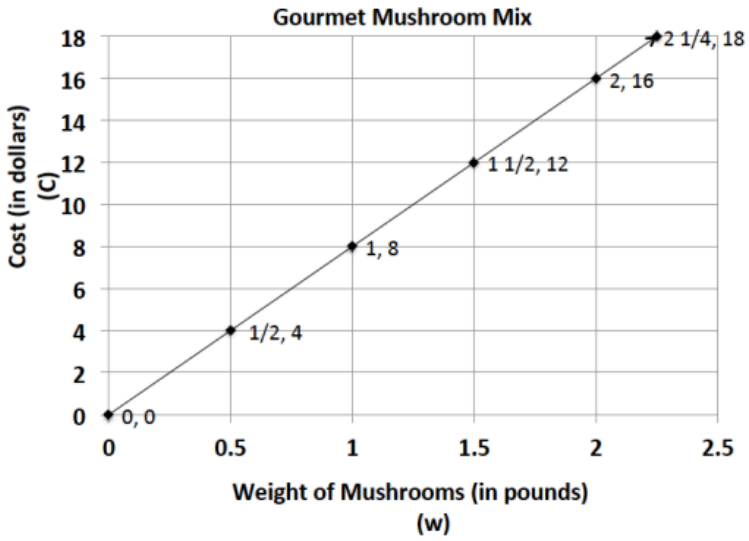

a. What are some things you notice about the graph?

b. What does the point (2, 6 ⅔) represent in the context of this problem?

c. Write an equation to that represents this data.

After taking a cooking class, you decide to try out your new cooking skills by preparing a meal for your family. You have chosen a recipe that uses gourmet mushrooms as the main ingredient. Using the graph below, complete the table of values and answer the following questions.

| Weight (in pounds) | Cost (in dollars) |
|---|---|
| 0 | 0 |
| $\frac{1}{2}$ | 4 |
| 1 | |
| $1\frac{1}{2}$ | 12 |
| | 16 |
| $2\frac{1}{4}$ | 18 |




a. Is this relationship proportional? How do you know from examining the graph?

b. What is the unit rate for cost per pound? Write it as an equation.

c. What ordered pair represents the unit rate, and what does it mean?

d. If you could spend $10.00 on mushrooms, how many pounds could you buy?

e. What would be the cost of 30 pounds of mushrooms?