Graphing Proportional Relationships

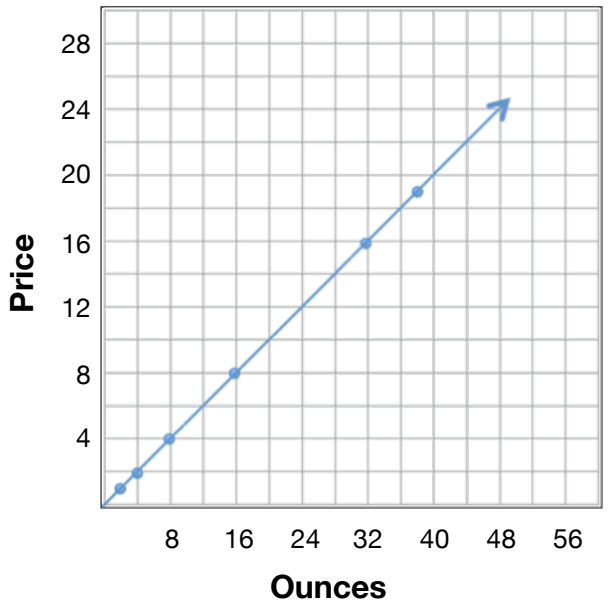
Use What You've Learned
Answers and Explanations

Use each of the following methods to solve the two problems shown below:

- **Create a table**
- **Create a graph**
- **Write and solve an equation**

1. Morgan bought trail mix at Roots Market that cost $4.00 for 8 ounces. How much will it cost to buy 38 ounces?

Ounces	Price
8	$4.00
16	$8.00
32	$16.00
4	$2.00
2	$1.00
38	**$19.00**



2. Equation:
   x: ounces y: price

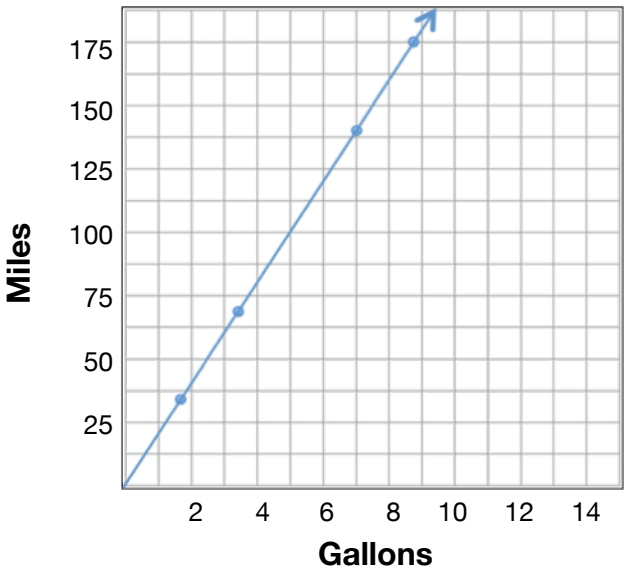
   y = 0.50x
   y = (0.50)(38)
   y = $19.00

3. Explain why this is a proportional relationship.

   This is a proportional relationship because the graph is a straight line that passes through the origin.

4. Colt drove 70 miles and used $3\frac{1}{2}$ gallons of gas. How many gallons will he use if he drives 175 miles?

Gallons	Miles
$3\frac{1}{2}$	70
7	140
$1\frac{3}{4}$	35
$8\frac{3}{4}$	175



5. Equation:
   x: gallons of gas y: miles

   $y = 20x$

   $y = 20(8\frac{3}{4})$

   $y = 175$

6. Explain why this is a proportional relationship.

   This is a proportional relationship because the graph is a straight line that passes through the origin.

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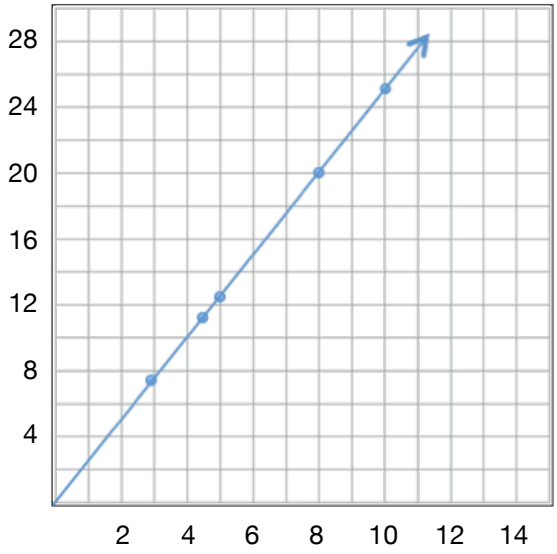
Study the following table:

x	3	4.5	5	8	10
y	7.5	11.25	12.5	20	25

7. Create a graph to represent this data.



8. Write an equation showing the relationship between x and y.

   y = 2.5x

9. Does this table represent a proportional relationship? Explain your reasoning.

   The table represents a proportional relationship because y is always 2.5 times x.

10. Create an everyday problem to match the data.

    Answers will vary.

    Example: Helen bought 3 pounds of ground beef for $7.50. If the cost is proportional to the pounds of ground beef bought, how much would 10 pounds cost?