Classwork

**Example 1**

Question #\_\_\_\_\_\_\_

Write it as a division expression.

Write it as a multiplication expression.

Make a rough draft of a model to represent the problem:

As you travel to each model, be sure to answer the following questions:

|  |  |  |  |
| --- | --- | --- | --- |
| **Original Question** | **Corresponding Division Expression** | **Corresponding Multiplication Expression** | **Write an Equation Showing the Equivalence of the Two Expressions.** |
| 1. How many miles are in miles? |  |  |  |
| 1. How many quarter hours are in hours? |  |  |  |
| 1. How many cups are in cups? |  |  |  |
| 1. How many pizzas are in pizzas? |  |  |  |
| 1. How many one-fifths are in wholes? |  |  |  |

**Example 2**

Molly has cups of flour. If this is of the number she needs to make bread, how many cups does she need?

* 1. Construct the tape diagram by reading it backward. Draw a tape diagram and label the unknown.
  2. Next, shade in .
  3. Label the shaded region to show that is equal to of the total.
  4. Analyze the model to determine the quotient.

Exercises 1–5

1. A construction company is setting up signs on miles of road. If the company places a sign every mile, how many signs will it use?
2. George bought submarine sandwiches for a birthday party. If each person will eat of a sandwich, how many people can George feed?
3. Miranda buys pounds of nuts. If she puts pound in each bag, how many bags can she make?
4. Margo freezes cups of strawberries. If this is of the total strawberries that she picked, how many cups of strawberries did Margo pick?
5. Regina is chopping up wood. She has chopped logs so far. If the logs represent of all the logs that need to be chopped, how many logs need to be chopped in all?

Problem Set

Rewrite each problem as a multiplication question. Model your answer.

1. Nicole used of her ribbon to wrap a present. If she used feet of ribbon for the present, how much ribbon did Nicole have at first?
2. A Boy Scout has meters of rope. He cuts the rope into cords long. How many cords will he make?
3. gallons of water fill a tank to capacity.
   1. What is the capacity of the tank?
   2. If the tank is then filled to capacity, how many half-gallon bottles can be filled with the water in the tank?
4. Hunter spent of his money on a video game before spending half of his remaining money on lunch. If his lunch costs , how much money did he have at first?
5. Students were surveyed about their favorite colors. of the students preferred red, of the students preferred blue, and of the remaining students preferred green. If students preferred green, how many students were surveyed?
6. Mr. Scruggs got some money for his birthday. He spent of it on dog treats. Then, he divided the remainder equally among his favorite charities.
   1. What fraction of his money did each charity receive?
   2. If he donated to each charity, how much money did he receive for his birthday?