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

**Algebra Concepts – Proportional Reasoning**

1. For Mr. Lamneck’s favorite fruit punch he uses 2 parts orange juice, 1 part grapefruit juice, and 3 parts seltzer water. How much of each ingredient does Mr. Lamneck need for 48 ounces of punch?

|----------------------------------------48 ounces -------------------------------------|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

|-------orange juice-------|-grapefruit|--------------seltzer water--------------|

juice

1. For a muffin recipe, Bert uses 3 cups of sugar for 12 muffins. How much sugar is there in each muffin?

|------------------------------------3 cups-------------------------------------|

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ? |  |  |  |  |  |  |  |  |  |  |  |

1 muffin

1. Joey drove his truck 45 miles on 3 gallons of gasoline. At this rate, how far could Joey drive on 18 gallons of gasoline?

|------------------------------------------? miles--------------------------------|

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|--45 miles--|

1. Sam got 4 out of 5 questions correct on a recent quiz. What percent should Sam receive on the quiz?

|--------------------------------------100 percent ---------------------------------|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

|------------------------------? percent----------------------------|

**Build Your Own Model**

1. In a recent commercial, Dr. Shaw announced, 3 out of 5 patients surveyed prefer Gleam toothpaste. If there were 15 patients surveyed, how many prefer Gleam?
2. Kent worked 15 hours on the first 3 days of the week. At this rate, how many hours would Kent work in a 7-day week?
3. On a deep sea fishing trip, Billy caught 9 fish in 2 hours. At this rate, how many fish would Billy catch on an 8-hour trip?

**Review**

**Solve for x.**

8.

|-------------------------------------------17--------------------------------------|

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |

9.

|------------------------------------------25----------------------------------------|

|  |  |
| --- | --- |
| x |  |

10. Team One wants to sell tickets to a talent show. The profit they earn is a function of the price they charge. Michael advises the Team One teachers that charging too little or too much for t-shirts will lead to very little profit.

Sketch a graph to show what type of model best fits this situation.