Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_Period: \_\_\_\_\_\_Date: \_\_\_\_\_\_

**5.3A Writing Proportions\_Classwork**

Objective: write proportions; solve proportions using mental math.

CC.SS.7.RP.2c 7.RP.3 MP2 Reasoning Abstractly and Quantitatively

Textbook: 5.3A pg 190\_#14-24 ALL

|  |  |
| --- | --- |
| ***Solving a Word Problem Using a Proportion:**** Set up your ratio using words- What is being *compared*?
* Set up your ratio using the *given information* in the problem
* Set up the ratio with the *variable*
* Solve using *cross products* or equivalent fractions
 | ***Proportion model:*****Words Given Ratio Variable****\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_** |

1. A chef uses 1 tomato for every 1.5 cups of black beans. She increases the amounts of ingredients in a recipe to make a proportional recipe. The new recipe has 6 cups of black beans. Write a proportion that gives the number (t) of tomatoes in the new recipe.

|  |  |  |
| --- | --- | --- |
|  | **Given Ratio** | **New ratio** |
| **Black Beans** |  |  |
| **Tomatoes** |  |  |

1. A school has 950 students. The ratio of female students to all students is 48 : 95. Write and solve a proportion to find the number (f) of students who are female.

|  |  |  |
| --- | --- | --- |
|  | **Given** **Ratio** | **New Ratio** |
|  |  |  |
|  |  |  |

1. You can buy 3 T-shirts for $24. Write a proportion that gives the cost (c) of buying 7 T-shirts

|  |  |  |
| --- | --- | --- |
|  | **Given** **Ratio** | **New Ratio** |
|  |  |  |
|  |  |  |

1. There are 3 white lockers for every 5 blue lockers. There are 180 white lockers in the school. How many lockers are blue? How many lockers are in the school?

|  |  |  |
| --- | --- | --- |
|  | **Given****Ratio** | **New Ratio** |
|  |  |  |
|  |  |  |

1. Test score worth 50 points; test score of 40%. (How many points did you earn if you scored 40% on the test?)

|  |  |  |
| --- | --- | --- |
|  | **Percent** | **Points** |
| **Part** |  |  |
| **Whole** |  |  |

***PRACTICE PROBLEMS***

|  |  |
| --- | --- |
| **1.** Carol can type 660 words in 12 minutes. How many words can she type in 40 minutes? | **2.**Thirty six pencils are packed in three boxes. How many pencils are packed in five boxes? |
| **3.** If it costs $13.50 for 5 notebooks, how much will it cost 8 notebooks? | **4.**If it is $14.25 for 4 pounds of meat, how much will it cost for 1 pound of meat?  |

**5.** *Write a proportion to find how many points a student needs to have on the test to get the given score.*

|  |  |
| --- | --- |
| 1. Test worth 200 points; test score of 85%
 | 1. Test worth 50 points; test score of 74%
 |
| 1. Test worth 25 points; test score of 80%
 | 1. Test worth 110 points; test score of 90%
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