Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #:\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_

**5.1A Writing and Comparing Unit Rates Activity\_Classwork**

*Objective: find ratios, rates, and unit rates involving ratios of fractions. CC.SS.7.RP.1 and RP.3*

*HW: 5.1A worksheet*

|  |  |  |
| --- | --- | --- |
| **WARM-UP***Are the fractions equivalent?*

|  |  |
| --- | --- |
| *1.* | *2.* |

 |

**“JUMPING JACK RATE ACTIVITY”**

|  |  |
| --- | --- |
| **Material:** | a calculator and a timer  |
| **Question:**  | How can you use unit rates to compare different quantities? |
| **Objective:** | Students will be able to write and compare rates (CC.SS.7.RP. 1, MP4: Model with Mathematics) |
|  |  |
| **Step 1:** | Work with your table to complete the given task |
| **Step 2:** | ***Organize experiment**** Choose one student to be Student 1, one student to be Student 2, one student to be Student 3, and one student to be Student 4.
* Record each person’s name in the table below. Each round, the student’s name written is the one who will be performing the activity.
* Make sure to have a timer and a counter for each round
 |
| **Step 3:** | ***Conduct an experiment*** When the timer says “go:”* Student 1 will start doing jumping jack.
* The counter will count the number of jumps until the timer says “stop.”
* Each student records the number of jumps in the table.
 |
| **Step 4:** | ***Rotate duties and repeat experiment***Repeat Step 3 for the next student on the list. Make sure to rotate duties and perform the activity for the specific number of seconds on the table.  |
| **Step 5:** | ***Find Unit Rates***Use division on a calculator to find the **unit rate (a rate that has a denominator of 1)** for each student and complete the fourth and fifth columns of the table. Round to the nearest hundredth. |

**EXPERIMENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Student** | **Time**  | **Number of jumping jacks** | **# of jumps** $÷$ **Time** | **Unit Rate** |
| Example:Sally | 10 seconds | 12 hops | $$\frac{12 jumps}{10 seconds}$$ | $$\frac{1.20 jumps}{1 second}$$1.20 jumps per sec |
|  | 10 seconds |  |  |  |
|  | 15 seconds |  |  |  |
|  | 20 seconds |  |  |  |
|  | 30 seconds |  |  |  |

**CONCLUSIONS**

1. Which student jumped the most times? Is it fair to compare the number of jumps that each student completed? Explain.
2. Which student has the highest unit rate?
3. Explain what is the unit rate mean in this activity?
4. Use the table, find how many jumping jacks each student could do in one minute.