|  |  |
| --- | --- |
| **Running Around Town- 6.EE.9** | |
| **Domain** | **Expressions and Equations** |
| **Cluster** | **Represent and analyze quantitative relationships between dependent and independent variables.** |
| **Standard(s)** | **6.EE.9** Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time. |
| **Materials** | Activity sheet |
| **Task** | **Running Around Town**  Trish runs a mile every 8 minutes while jogging around town.  Part 1:  Write an equation to find the amount of distance Trish runs for every minute that she runs.  Part 2:  Make a table to show how far Trish has run after: 2, 4, 6, 8, 10, 12, 14, and 16 minutes.  Part 3:  Trish loses track of her distance but knows she has been running between 40 and 45 minutes. How far has Trish gone?  Part 4:  Write an explanation about you solved Part 3. |

|  |  |  |
| --- | --- | --- |
| **Rubric** | | |
| **Level I** | 1. **Level II** | **Level III** |
| Developing Proficiency   * Student uses inappropriate solution strategy and does not get the correct answer. | Not Yet Proficient   * There are one or two errors. | Proficient in Performance   * Accurately solves problem. * Part 1: Distance= Time x 1/8 or Distance = Time/ 8 * Part 2: Values of Time and Distance: 2 minutes: ¼ mile; 4 minutes: ½ mile; 6 minutes: ¾ mile; 8 minutes: 1 mile; 10 minutes: 1 ¼ miles; 12 minutes: 1 ½ miles; 14 minutes: 1 ¾ miles; 16 minutes: 2 miles. * Part 3: 40 minutes: Trish has run 5 miles. 45 minutes: Trish has run 5 and 5/8 miles. Trish has run between 5 and 5 and 5/8 miles. * Part 4: The explanation is clear and accurate. |

|  |
| --- |
| **Standards for Mathematical Practice** |
| **1. Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| 3. Constructs viable arguments and critiques the reasoning of others. |
| **4. Models with mathematics.** |
| 5. Uses appropriate tools strategically. |
| **6. Attends to precision.** |
| 7. Looks for and makes use of structure. |
| 8. Looks for and expresses regularity in repeated reasoning. |

**Running Around Town**

Trish runs a mile every 8 minutes while jogging around town.

Part 1:

Write an equation to find the amount of distance Trish runs for every minute that she runs.

Part 2:

Make a table to show how far Trish has run after: 2, 4, 6, 8, 10, 12, 14, and 16 minutes.

Part 3:

Trish loses track of her distance but knows she has been running between 40 and 45 minutes. How far has Trish gone?

Part 4:

Write an explanation about you solved Part 3.