

Additional Practice *(continued)***Investigation 3****Variables and Patterns**

3. The equation $d = 44t$ represents the distance in miles covered, after traveling 44 miles per hour for t hours.
- Make a table that shows the distance traveled, according to this equation, for every half hour between 0 and 4 hours.
 - Sketch a graph that shows the distance traveled between 0 and 4 hours.
 - If $t = 2.5$, what is d ?
 - If $d = 66$, what is t ?
 - Does it make sense to connect the points on this graph with line segments? Why or why not?

Additional Practice *(continued)*

Investigation 3

Variables and Patterns

4. a. The number of students at Smithville Middle School is 21 multiplied by the number of teachers. Use symbols to express the rule relating the number of students and the number of teachers as an equation. Use single letters for your variables and explain what each letter represents.
- b. If there are 50 teachers at Smithville Middle School, how many students attend the school?
- c. If 1,260 students attend Smithville Middle School, how many teachers teach at the school?
5. a. Refer to the table below. Use symbols to express the rule relating the side length of a square to its area as an equation. Use single letters for your variables, and explain what each letter represents.

Squares

Side Length (cm)	Area (cm ²)
1	1
1.5	2.25
2	4
2.5	6.25
3	9
■	■
■	■
■	■

- b. Use your equation to find the area of a square with a side length of 6 centimeters.
- c. Use your equation to find the side length of a square with an area of 1.44 square centimeters.