**Biking to Bernie’s**



Beth and Billy are biking to their friend Bernie’s house.

After 1 mile, Beth and Billy have traveled of the total distance to Bernie’s house.

1. How much farther do Beth and Billy have to go in order to arrive at Bernie’s?
2. What is the total distance to Bernie’s house?
3. If they are traveling at a constant rate, and it took them 20 min to ride the first mile, how many more minutes will it take them to arrive at Bernie’s?
4. What will be the total time spent on their bikes?

* **Represent your work in as many ways as possible!**
* **Be prepared to share your solution strategy with your classmates!**
* **Be prepared to question the work of your classmates!**
* **Be precise ☺**

Possible Solution Paths:



1. If, after 1 mile, they have traveled of the total distance, then the numerator 4 can be thought of as the four equal parts of the mile that they’ve traveled (each being a quarter mile). Since they still have of the distance to travel, it’s one more ‘piece’ equal in size to the four parts that they’ve already traveled, or another quarter mile…

mile

mile

mile

mile

mile

1 mile

…therefore… since it takes four of the sections to equal 1 mile, then each of those sections must be mile. Since Beth and Billy have one section left to travel, then they have mile left.

2) The total trip is 1 miles.

3) Since it took them 20 minutes to bike the first mile, then each of the mile sections took

5 minutes (see diagram above…5 min for each of the first four boxes would total 20

minutes). It will take them 5 minutes for the last section of the trip, as well.

4) The first mile took 20 minutes, the last quarter mile will take 5 minutes, so the entire

trip will take 25 minutes.