Catching Pacific Lamprey at Willamette Falls Data Table

"Capture" lamprey crackers from your container. How many lamprey did you capture? ______ These will be your "tagged" lamprey.

Replace these crackers with the same amount of pretzel lamprey. Return the pretzel lamprey to the container and mix them up with the rest of the lamprey. (Do not return the captured lamprey—the pretzel ones are replacing them.)

1. "Recapture" lamprey by scooping out a sample of the pretzels and other crackers. Count how many pretzel lamprey and how many total lamprey there are. Record the numbers below, then put the lamprey back in, mix them up again, and "recapture" them.

| | "Tagged" lamprey | Total number of lamprey | Ratio of "tagged" to total |
|-------------|------------------|-------------------------|----------------------------|
| Recapture 1 | | | |
| Recapture 2 | | | |
| Recapture 3 | | | |
| Recapture 4 | | | |
| Recapture 5 | | | |
| Recapture 6 | | | |

2. Find the average tagged and the average total. Record in the table below:

| Average tagged | Average total | Ratio of tagged to total |
|----------------|---------------|--------------------------|
| | | |

3. Using the information above, write a proportion to help you figure out the total number of lamprey at Willamette Falls.

Your proportion: ______ = _____

4. On the back of this paper write an explanation of how your team will explain the mathematical thinking that led you to your proportion. You can use pictures to support your written statement. Be prepared to share the team's thoughts with the rest of the class.