

## “Take Your Best Shot!”

**Objective:**

By the end of the activity, the students will be able to:

- Collect data to create ratios.
- Convert a ratio into a rate.

**Materials:**

- “Ratio to Rate” activity sheet
- Small, soft balls
- Baskets
- Stopwatches

**Teacher Preparation:**

- Copy the “Ratio to Rate” activity sheet.
- Have enough stopwatches, baskets, and balls so that each group has one set.
- Decide where the basket(s) and free throw lines will be placed. (You may want to tape the area(s) on the floor of your classroom.)
- Make sure your students are in groups of three.

**Question(s):**

Who has the best basketball skills? If I gave you 1 minute to make as many baskets as you could, how many do you think you would make?

**Activity:**

- Have the students assign each person in their group to a certain number of minutes. They will take turns making shots into their baskets. One group member will need to count the number of shots made. The other group member will need to keep track of the stopwatch.
- After everyone has attempted and recorded have the students sit down and calculate their ratios as rates.

**South Carolina College- and Career-Ready Standards for Mathematics:**

6.RP.3 Apply the concepts of ratios and rates to solve real-world and mathematical problems.

- The teacher should be facilitating the activity, asking probing questions and making observations of the students’ thinking.

**Extensions:**

- The students can convert their data into percents.
- The students can compare the number of missed shots to the total number of attempts.



# Take Your Best Shot: Ratios to Rates

## Supplies Needed:

- 1 Stopwatch
- 1 Basket
- 1 Ball

**Directions:** Each group member will rotate duties. The shooter will attempt as many free throws until his or her time runs out. The time keeper will use the stopwatch to make sure the shooter starts and stops at the right time. The counter will count the number of completed shots.

Number of Minutes	Name of Shooter	Ratio		Rate Convert the ratio to show the number of completed free throws per minute.
		# of completed free throws	# of minutes	
2 minutes			to	to
3 minutes			:	:
4 minutes			per	per

**Reflection:** Based on your data, which group member would be the best player on your team? Justify your answer.

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