

## Lesson Plan

### MLB Batting Averages

**Book:** *Christian Yelich: Baseball Star*

**Series:** Biggest Names in Sports

**Level:** Navigator

#### Objective

To help students apply knowledge of place value to round decimals to the thousandths place and to determine which of two decimals is larger.

#### Supplies

- *Christian Yelich: Baseball Star* book
- MLB Batting Averages worksheet (attached)

#### Before the Activity

Read through the *Christian Yelich: Baseball Star* book, or assign it to students to read on their own. Print an MLB Batting Averages worksheet for each student.

#### Activity

One way to evaluate a baseball player is to look at the player's batting average. A batting average is calculated by dividing the player's number of hits by the player's total number of at bats. Batting averages are usually written out to three decimal places, or the thousandths place. In the major leagues, few players can get batting averages above .300.

Give each student an MLB Batting Averages worksheet. Students should calculate the batting average for each player, rounding each answer to three decimal places. Remind students to use the following rules when rounding:

1. Look at the number that's one decimal place to the right of the place you're rounding to (in this case, the number that's one decimal place to the right of the thousandths place).
2. If this number is 5 or higher, round up. Increase the number in the place you're rounding to (here, the thousandths place) by one.
3. If this number is 4 or lower, round down. The number in the place you're rounding to (here, the thousandths place) stays the same.

**Evaluation**

Use the attached answer key to give students 1 point for each correct answer, for up to 8 points.

**Standards**

This lesson may be used to address the Common Core State Standards' mathematics standards, grade 5 (CCSS.MATH.CONTENT.5.NBT.A.3; CCSS.MATH.CONTENT.5.NBT.A.4).

# MLB Batting Averages

1. Micah Grukowski had 194 hits this season. If Micah had 610 at bats, what was his batting average?
2. Alexei Svengard also had 610 at bats this season. If Alexei had 156 hits, what was his batting average?
3. Nikola Lindquist had 550 at bats this season. If Nikola had 153 hits, what was his batting average?
4. Emilio Cortez had 193 hits this season. If Emilio had 550 at bats, what was his batting average?
5. Duarte Rodriguez had 175 hits this season. If Duarte had 580 at bats, what was his batting average?
6. Which players had batting averages greater than .300?
7. Who had a higher batting average, Nikola Lindquist or Alexei Svengard?
8. Who had a higher batting average, Micah Grukowski or Duarte Rodriguez?

# MLB Batting Averages **ANSWER KEY**

1. Micah Grukowski had 194 hits this season. If Micah had 610 at bats, what was his batting average?

$$194 / 610 = 0.31803279$$

**round down to .318**

2. Alexei Svengard also had 610 at bats this season. If Alexei had 156 hits, what was his batting average?

$$156 / 610 = 0.2557377$$

**round up to .256**

3. Nikola Lindquist had 550 at bats this season. If Nikola had 153 hits, what was his batting average?

$$153 / 550 = 0.27818182$$

**round down to .278**

4. Emilio Cortez had 193 hits this season. If Emilio had 550 at bats, what was his batting average?

$$193 / 550 = 0.35090909$$

**round up to .351**

5. Duarte Rodriguez had 175 hits this season. If Duarte had 580 at bats, what was his batting average?

$$175 / 580 = 0.30172414$$

**round up to .302**

6. Which players had batting averages greater than .300?

**3 players: Micah Grukowski, Emilio Cortez, Duarte Rodriguez**

7. Who had a higher batting average, Nikola Lindquist or Alexei Svengard?

**Nikola Lindquist**

8. Who had a higher batting average, Micah Grukowski or Duarte Rodriguez?

**Micah Grukowski**