

### Activity 3: Batting Averages and More

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A. The following data is for the eleven of the greatest hitters in the baseball hall of fame.

<b>Player</b>	<b>Games</b>	<b>At Bats</b>	<b>Hits</b>	<b>Batting Average (BA)</b>	<b>Runs Batted In (RBI)</b>	<b>Home Runs</b>
Hank Aaron	3298	12364	3771	0.305	2297	755
Rod Carew	2469	9315	3053	0.328	1015	92
Ty Cobb	3034	11429	4191	0.367	1961	118
Lou Gehrig	2164	8001	2721	0.34	1990	493
Rogers Hornsby	2259	8173	2930	0.358	1584	301
Reggie Jackson	2820	9864	2584	0.262	1702	563
Mickey Mantle	2401	8102	2415	0.298	1509	536
Willie Mays	2992	10881	3283	0.302	1903	660
Stan Musial	3026	10972	3630	0.331	1951	475
Babe Ruth	2503	8399	2873	0.342	2211	714
Ted Williams	2292	7706	2654	0.344	1839	521

1. Place this data in a spreadsheet using either a computer or in a graphing calculator. Determine the percentage of home runs per games, the percentage of home runs per at bat, and the home runs per hit.
2. Rank these eleven players in descending order of the ratio of home runs per game.
3. Rank these eleven players in descending order of the ratio of home runs per at bat.
4. Rank these eleven players in descending order of the ratio of home runs per hit.
5. Based on all of the data, make an argument that Babe Ruth is the best hitter in baseball history.
6. Based on all of the data, make an argument that one of these eleven is the number two greatest hitter in baseball history.
7. Make a statistically based argument that Hank Aaron is the greatest home run hitter of all time.

B. The morning edition of the daily newspaper reported that Mark McGuire had a batting average of  $.350$ . After the Saturday night game in which McGuire had 3 hits in 5 times at bat, his new batting average was reported to be  $.352$ . Determine the number of at bats and hits McGuire had prior to the Saturday night game.

C. At different times in the season, when Mark McGuire had 3 hits for 5 times at bat, his batting average jumped from  $.350$  to  $.366$ , from  $.350$  to  $.358$ , and from  $.350$  to  $.355$ . Explain why the increase is not the same amount each time.