# Multiple Choice Question Solution

To solve this problem, I need to:

1. Find the probability of a hit for Babe Ruth using the 1923 data

2. Apply this probability to a new number of at bats using properties of the binomial distribution

## Step 1: Find the probability of a hit

In 1923, Babe Ruth had:

- 205 hits in 522 at bats

- Therefore, p = 205/522 ≈ 0.3927 (this is his batting average)

## Step 2: Calculate the expected number of hits in 529 at bats

For a binomial distribution, the expected value (mean) is:

- E(X) = np

- Where n = number of trials and p = probability of success

Substituting:

- E(X) = 529 × 0.3927 = 207.74 ≈ 208 hits

## Answer

The expected number of hits in 529 at bats is 208, which corresponds to answer choice (D).

This makes intuitive sense as well, since we're looking at a slightly higher number of at bats (529 vs 522), so we expect a proportionally higher number of hits compared to the original 205.