

Velocity/Acceleration Review (Assignment 3)

The following table shows the time on the clock as Michael Phelps swam the 200 meter butterfly. Use it to answer the questions that follow.

Start	50 meters	100 meters	150 meters	Finish
0.0 seconds	27.1 seconds	59.0 seconds	91.2 seconds	117.8 seconds

1. What was Michael Phelps's average velocity for the first 50 meters of the race?
2. What was his average velocity for the last 50 meters of the race?
3. What was Michael Phelps's average acceleration during the first 50 meters of the race?
4. What was his average acceleration throughout the entire race?
5. a) Was Michael Phelps travelling faster between the 50 and 100 meter mark, or between the 100 and 150 meter mark? Show all work.

b) Does this mean that he accelerated or decelerated from the 100 meter mark to the 150 meter mark? By how much?
6. What was his average velocity through the race?
7. What was his average acceleration throughout the entire race?