Who's The Fastest Human?

Who is the fastest person on Earth? It turns out that this is not an easy question to answer. One event where people from all over the world compete in foot races is the Olympics (see Figure 5.9). Usually, people can run the fastest over the shortest distance, the 100 meter race. However, in the 1996 summer Olympics in Atlanta, something different happened:
Donovan Bailey set a world record in the 100 meter dash of 9.84 seconds, and Michael Johnson set a world record in the 200 meter dash of 19.32 seconds. It took Johnson less than twice Bailey's time to run twice as far. Which one was the fastest man in 1996?

Your Challenge: Write a convincing argument to support the position that Bailey was faster and a convincing argument that Johnson was faster.

Product:

- Write a paragraph describing how Bailey was faster than Johnson supported with evidence from the data provided.
- Write a second paragraph describing how Johnson was faster than Bailey using a different evidence source.
- Finally, create a graph of one of the data sources that will help support one of your arguments.

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Table 5.1 shows the times and positions for each race. Position is measured from the starting point in meters. Time is measured from the starting gun in seconds. For example, Donovan Bailey passed the halfway mark (50 meter marker) 5.6 seconds after he started, and Michael Johnson passed the 50 meter marker 6.3 seconds after he started.

Table 5.1. Times **and Positions for Both Races**

BAILEY	
POSITION (METERS)	TIME (SEC)
0	0.0
10	1.9
20	3.1
30	4.1
40	4.9
50	5.6
60	6.5
70	7.2
80	8.1
90	9.0
100	9.84

JOHNSON	
POSITION (METERS)	TIME (SEC)
0.0	0.0
50.0	6.3
100.0	10.12
112.9	11.4
140.3	14.0
149.4	14.8
167.7	16.2
176.9	17.0
186.0	17.8
200.0	19.32

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In racing, the total time can be divided into smaller portions known as splits, the time it takes to cover different portions of the race course. For example, Donovan Bailey covered the third 10 meter split in 1 second. This means that over that stretch, he averaged 10 meters per second (1 meter per second is equal to 2.2 miles per hour). Table 5.2 shows both races divided into splits.

Table 5.2. Time Splits for Both Races

BAILEY SPLITS		
DISTANCE [M)	SPLIT TIME [SEC)	SPEED (M/SEC)
10	1.9	5.3
10	1.2	8.3
10	1.0	10.0
10	0.8	12.5
10	0.7	14.3
10	0.9	11.1
10	0.7	14.3
10	0.9	11.1
10	0.9	11. I
10	0.84	11.9

JOHNSON SPLITS		
DISTANCE **[M)**	SPLIT TIME (SEC]	SPEED **(M/SEC)**
50.0	6.3	7.9
50.0	3.82	13.I
12.9	1.28	10.I
27.4	2.6	10.5
9.1	0.8	11.4
18.3	1.4	13.1
9.2	0.8	11.5
9.1	0.8	11.4
14.0	1.52	9.2