QUESTION:
Carl Lewis set a world record for the 100.0m run with a time of t_1=9.86 seconds. If, after reaching the finish line, Mr Lewis walked directly back to his starting point in t_2=90.9 seconds, what is the magnitude of his average velocity for the 200.0?

SOLUTION
The average **speed** is

$$\upsilon_{AV} = \frac{L}{t}$$

$L = 100 + 100 = 200 \text{ m}$ - is the distance traveled by Carl Lewis

$t = t_1 + t_2 = 9.86 + 90.9 = 100.76 \text{ s}$

Hence, the average speed is

$$\bar{\upsilon} = \frac{L}{t} = \frac{200}{100.76} = 1.98 \text{ m/s}$$

And, as Lewis turns back to the start, his displacement is equal to zero $\vec{r} = \vec{0}$, and his average **velocity** is

$$\vec{\upsilon} = \frac{\vec{r}}{t}$$

$$|\vec{\upsilon}| = \frac{0}{t_1 + t_2} = 0 \text{ m/s}$$

ANSWER
The average speed is $\bar{\upsilon} = 1.98 \text{ m/s}$
The magnitude of the average velocity is 0 m/s