The Race (revisited)

Wayne and Bob race each other along a straight running track.
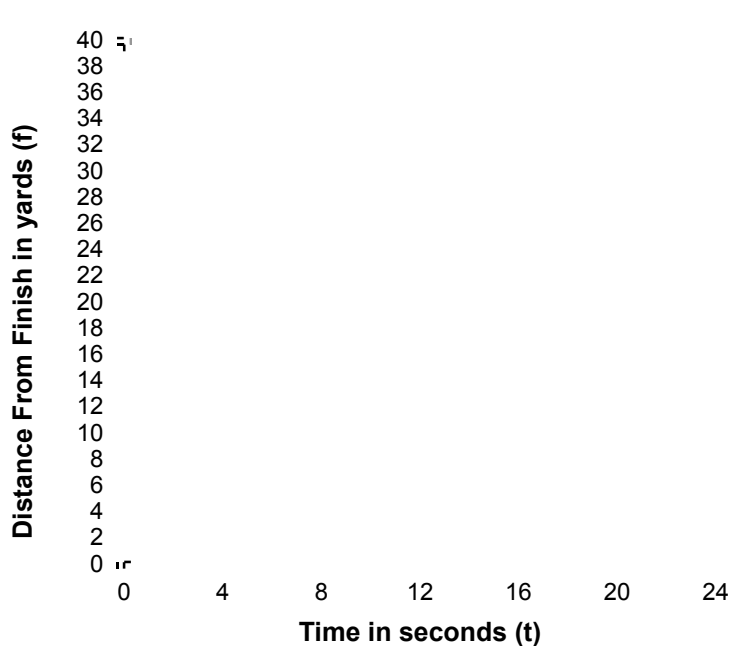
1. The following equation can be used to describe Wayne's race:

$s = 4t$ s is the distance, in yards, from the **Starting Line**.

t is the time, in seconds, from the beginning of the race.

a. Plot this line on the graph.

b. Bob starts 18 yards ahead of Wayne. He runs at a speed of 1 yard per second.
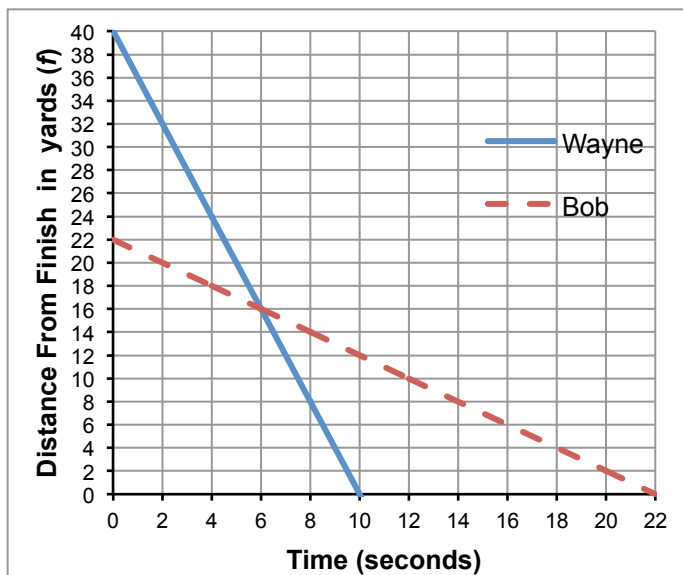Plot a second line on the graph that represents Bob's race.

c. What is the equation of this second line?

The diagram below shows the distance a runner is from the Starting Place and from the Finishing Line.

Starting Place   Finishing Line

← Distance from Starting Place in yards (*s*) → ← Distance from Finishing Line in yards (*f*) →
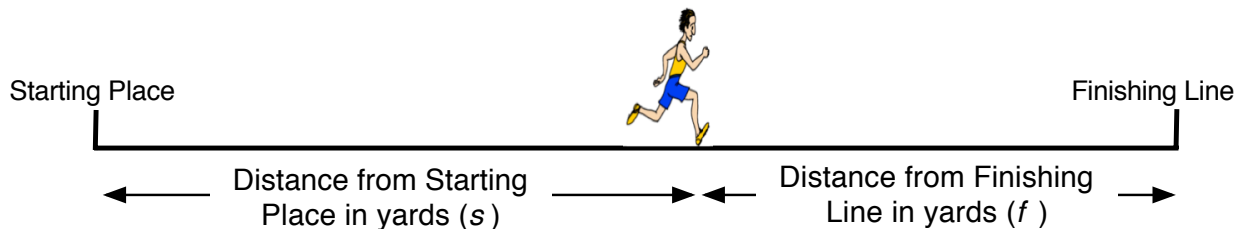
The graph describes the race.

On this graph the distance is measured from the runner to the finish, not the start.

2. When is one runner running faster than the other? Explain how you know.

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3. If f is the distance, in yards, from the Finishing Place.
        t is the time, in seconds, from the start of the race.

   What are the equations of the two lines?

   Equation of Wayne's line: ....

   Equation of Bob's line: ....

4. Who gets to the finishing line first? Explain how you know.

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