

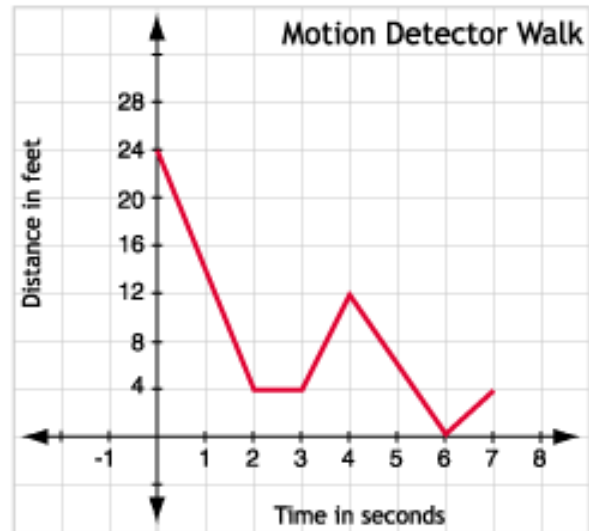
## Analyzing graphs

Block 2 Student Activity Sheet

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Examine the graph at the right and answer these questions about how Robert should move to match the graph:

1. Where should Robert begin his movement?
2. How should Robert move for the first 2 seconds?



3. What should Robert do between 2 and 3 seconds?
4. What should Robert do between 3 and 7 seconds?
5. When should Robert move the most quickly?

## Analyzing graphs

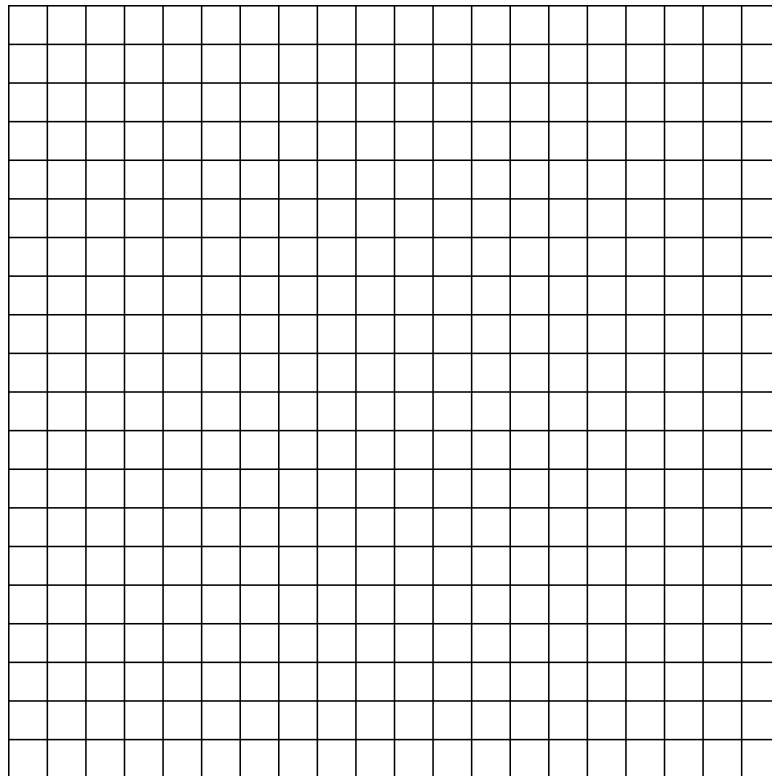
### Block 2 Student Activity Sheet

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6. Using what you have learned, write a detailed description of how Robert's position relative to the motion detector changes over the time interval from 0 to 7 seconds.

7. Create a graph that represents this situation.

Starting 6 feet from a motion detector, walk away at a constant rate for 2 seconds. Stop walking for 3 seconds, and then continue walking away from the motion detector at a faster constant rate for 2 more seconds. Stop walking for 1 second.

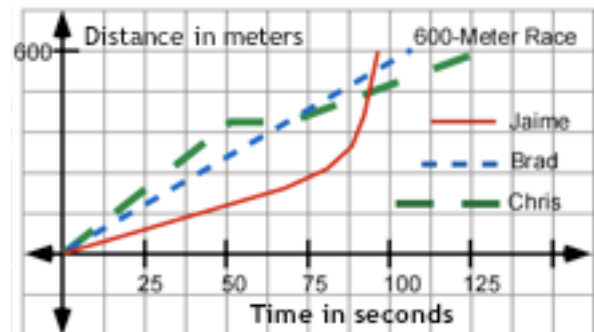


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Use the graph of three athletes (Jaime, Brad, and Chris) running a race to answer these questions:



- At 50 seconds into the race, who is leading?
- What can you observe about how each runner ran the race?

Who is leading when?

10. What happens about 75 seconds into the race, according to the graph?

11. Who wins the race?

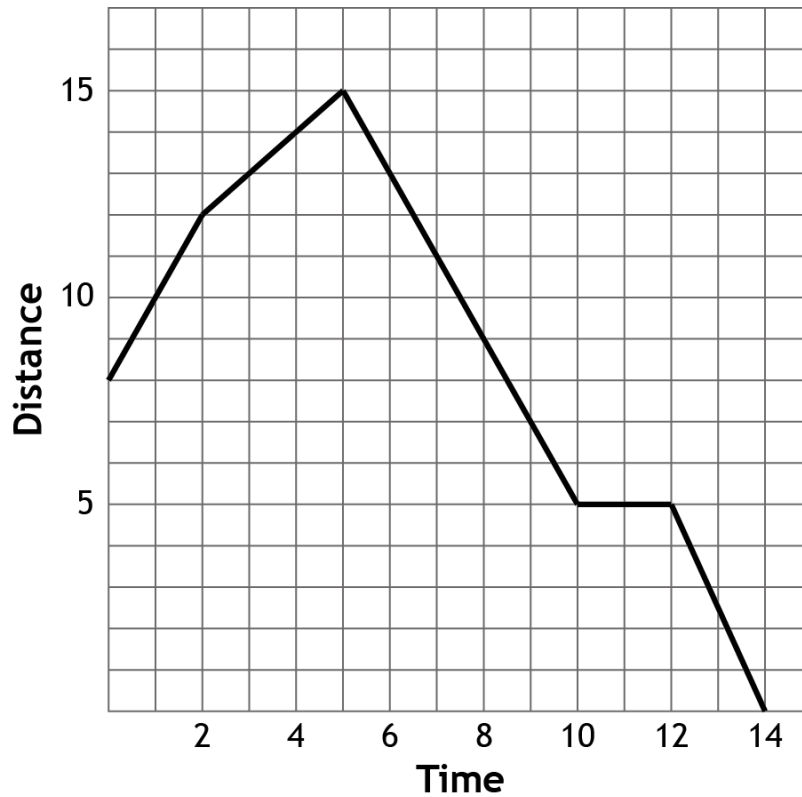
12. What can you say about each of the runners' times?

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13. **REINFORCE** Below is a graph that represents distance as a function of time. Create a detailed situation that may be represented by this graph. Choose appropriate units for distance and time.



## Analyzing graphs

### Block 2 Student Activity Sheet

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14. **REINFORCE** The cross sections of two swimming pools that will be filled at a constant rate are shown below.

For each pool write a description relating how the depth of the water in each pool varies over time. Then sketch a graph of each description comparing how the depth in each pool varies over time, using the appropriate units.

