

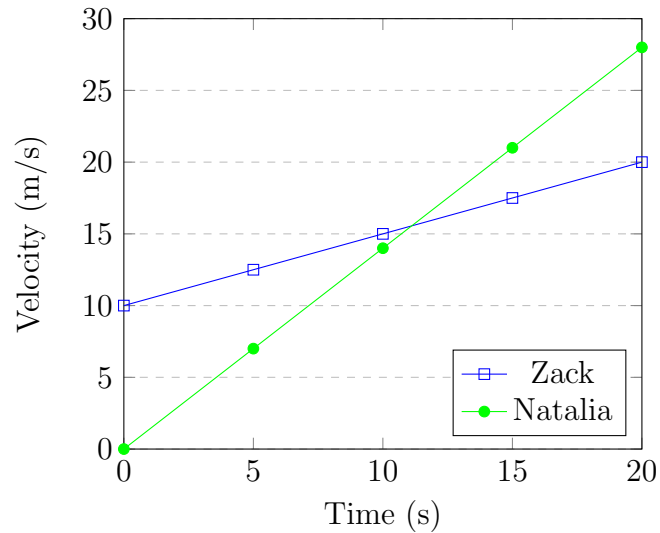


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Assignment 3.02: Velocity vs Time Graphs

Graph 1: Velocity vs Time for Two People



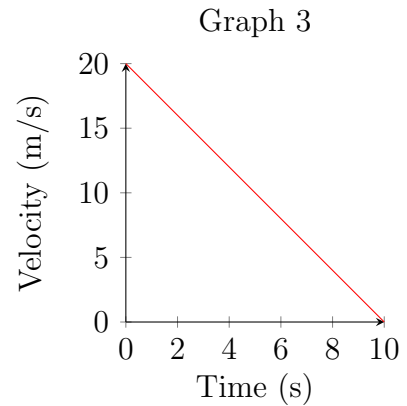
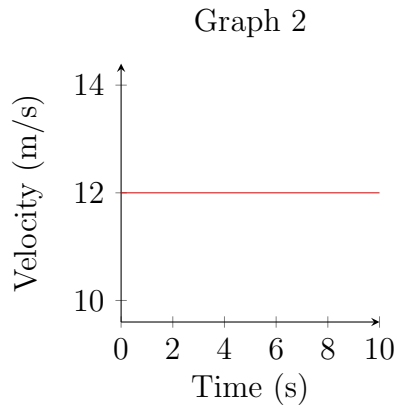
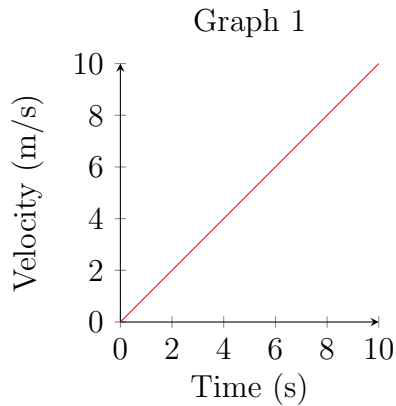
1. Use Graph 1 to determine the following:
 - (a) Who is moving faster at $t=5$ seconds?
 - (b) How far has Natalia traveled by $t=10$ seconds?
 - (c) What is Zack's acceleration?
 - (d) What is Natalia's acceleration?
 - (e) Assuming both people start in the same place, who travels farther? Explain your reasoning.
 - (f) Graph 1 describes a race between Zack and Natalia. In at least 4 complete sentences, describe what happened during this race.



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2. Use the graphs to answer the following questions:



(a) Graph 1:

- Describe the motion of the object in one sentence.
- Determine the acceleration of the object.
- Determine the distance traveled in 10 seconds.

(b) Graph 2:

- Describe the motion of the object in one sentence.
- Determine the acceleration of the object.
- Determine the distance traveled in 10 seconds.

(c) Graph 3:

- Describe the motion of the object in one sentence.
- Determine the acceleration of the object.
- Determine the distance traveled in 10 seconds.



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3. Sketch a graph that corresponds to each situation below:

(a) A car is parked.

(b) A truck drives forward 10 meters at a constant speed, then stops.

(c) A lion runs forward, then stops, then walks back to where it started.

