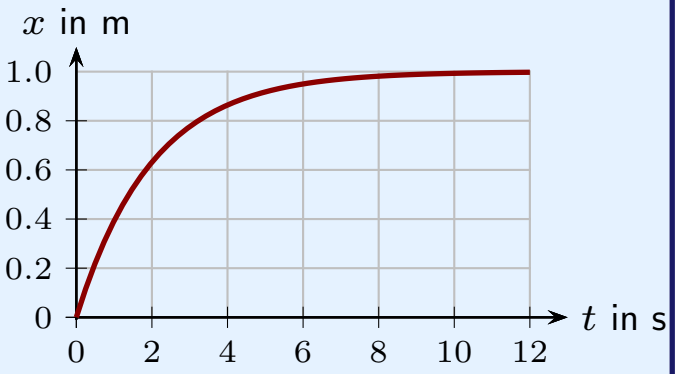
Instantaneous Velocity for the Moving Man

t_i	t_f	x_i	x_f	Δt	Δx	v_{avg}
4.00 s	5.00 s	2.00 m	5.00 m	**1.00** s	3.00 m	**3.00** m/s
4.00 s	4.50 s	2.00 m	3.25 m	**0.50** s	2.50 m	**2.50** m/s
4.00 s	4.10 s	2.00 m	2.21 m	**0.10** s	0.210 m	**2.10** m/s
4.00 s	4.05 s	2.00 m	2.103 m	**0.05** s	0.103 m	**2.05** m/s
4.00 s	4.01 s	2.00 m	2.020 m	**0.01** s	0.020 m	**2.00** m/s

Warm Up Question 1

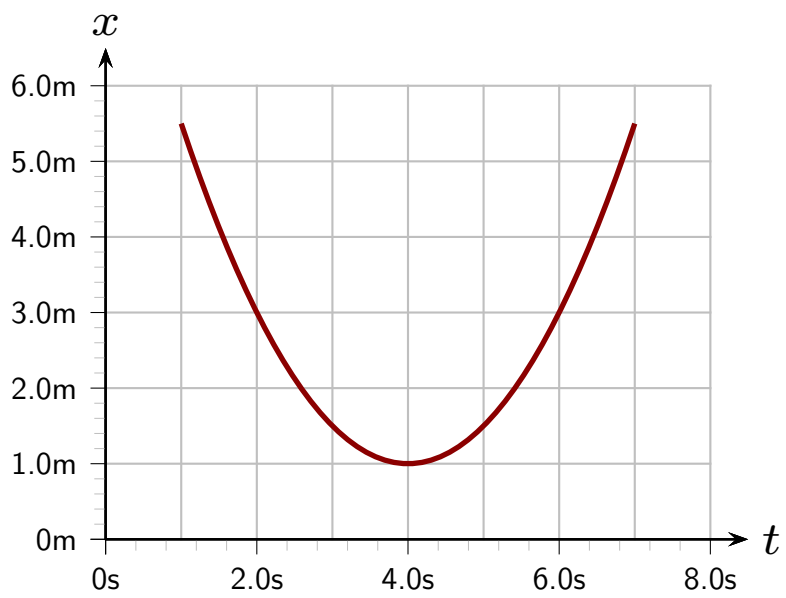
The graph illustrates the position of a car versus time. Describe whether the instantaneous velocity is positive or negative. Does the velocity increase or decrease as time passes? Explain your answers.



1. Always positive. Decreases with time. Slope.
2. Always positive. Increases with time.
3. Always positive. Increases earlier, later constant?
4. Always positive. Decreases earlier, later constant?
5. Always negative. Car slows.

Question 1

A graph of position vs. time for an object that moves in one dimension is as illustrated.



Which of the following is true?

1. The object speeds up at all times.
2. The object slows down at all times.
3. The object speeds up before 4 s and slows down after 4 s.
4. The object slows down before 4 s and speeds up after 4 s.

Warm Up Question 2

Go to the Phys 131 course website (not D2L). Look in the navigation bar on the left or at the top and click "Course Materials." This will open a new page with a day-by-day listing of the course activities. Click on the link for the "Slides 2" on August 20. You should see the quiz questions that were covered in the class and one more (Question 5) at the very end that was not covered in class. Now answer that last question.

1. Response
2. Response