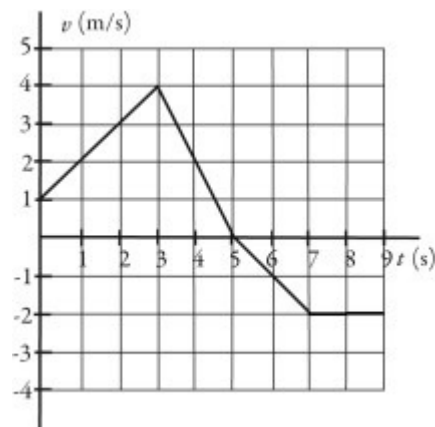
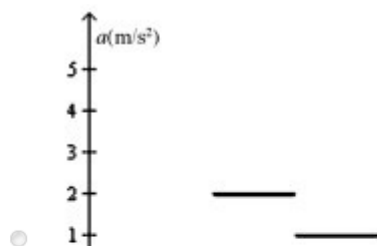
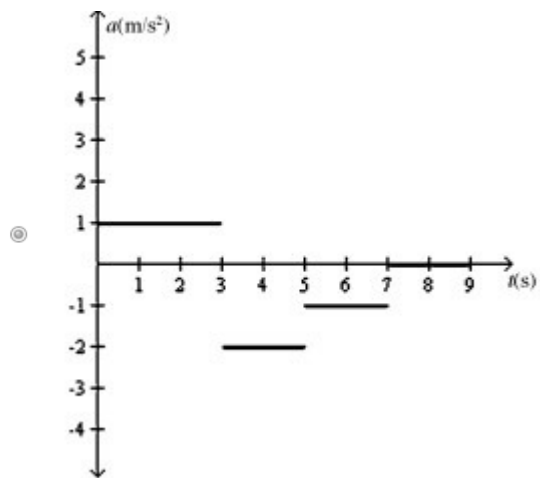
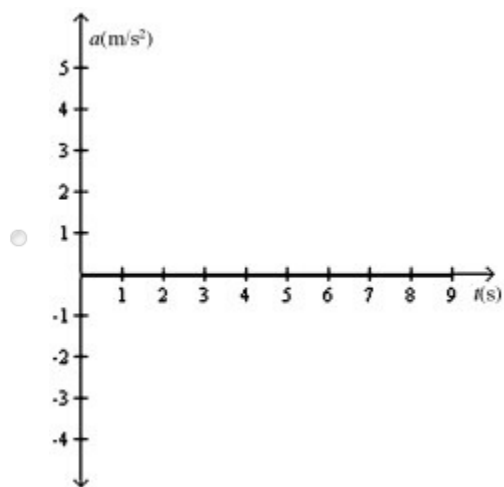
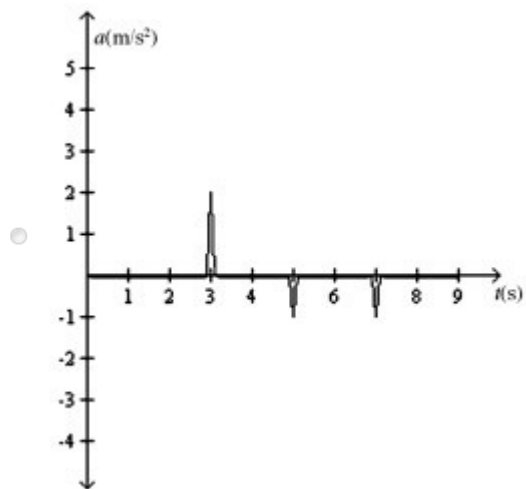


**Quiz 1****Due: 11:59pm on Tuesday, October 21, 2014**You will receive no credit for items you complete after the assignment is due. [Grading Policy](#)**Conceptual Question 2.13****Part A**

An object is moving in a straight line along the  $x$ -axis. A plot of its velocity in the  $x$ -direction as a function of time is shown in the figure. Which graph represents its acceleration in the  $x$ -direction as a function of time?

**ANSWER:**



Correct

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### Conceptual Question 2.01

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#### Part A

If the acceleration of an object is negative, the object must be slowing down.

ANSWER:

- ☐ True
- ☒ False

Correct

---

### Conceptual Question 2.03

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#### Part A

If an object is accelerating toward a point, then it must be getting closer and closer to that point.

ANSWER:

- ☐ True
- ☒ False

Correct

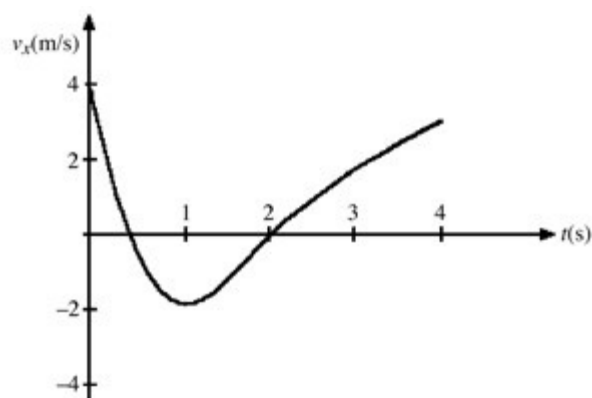
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### Conceptual Question 2.15

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#### Part A

The figure shows the velocity of a particle as it travels along the  $x$ -axis. What is the direction of the acceleration at  $t = 0.5$  s?



ANSWER:

- ☒ in the  $-x$  direction
- ☐ in the  $+x$  direction
- ☐ The acceleration is zero.

**Correct**

---

## Problem 2.10

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### Part A

The position of an object as a function of time is given by  $x = bt^2 - ct$ , where  $b = 2.0 \text{ m/s}^2$  and  $c = 6.7 \text{ m/s}$ , and  $x$  and  $t$  are in SI units. What is the instantaneous velocity of the object when  $t = 3.3$ ?

ANSWER:

- ☐ 9.1 m/s
- ☒ 6.5 m/s
- ☐ 5.2 m/s
- ☐ 7.8 m/s

**Correct**

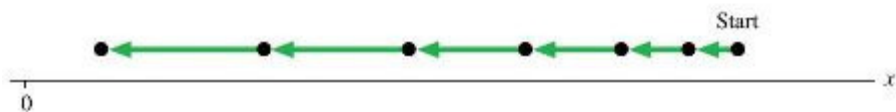
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## Reading Question 2.07

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### Part A

Here is a motion diagram of a car speeding up on a straight road:



The sign of the acceleration  $a_x$  is

ANSWER:

- ☐ Zero.
- ☐ Positive.
- ☒ Negative.

**Correct**

Correct!

---

## Reading Question 2.08

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### Part A

A ball is tossed straight up in the air. At its very highest point, the ball's instantaneous acceleration  $a_y$  is

ANSWER:

- ☐ Zero.
- ☒ Negative.
- ☐ Positive.

**Correct**

Correct!

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## Reading Question 2.03

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### Part A

At the turning point of an object,

ANSWER:

- ☒ only the instantaneous velocity is zero.
- ☐ only the acceleration is zero.
- ☐ both the instantaneous velocity and the acceleration are zero.
- ☐ neither the instantaneous velocity nor the acceleration is zero.

**Correct**

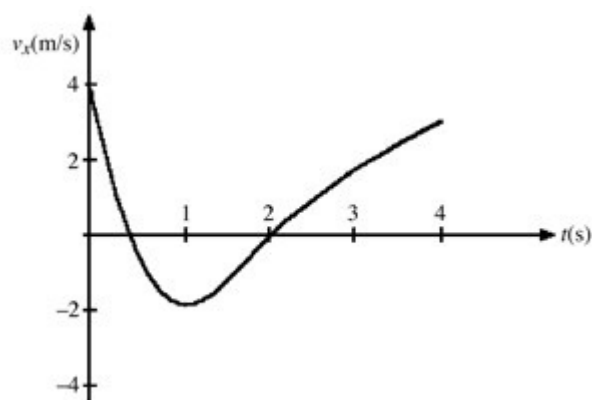
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## Conceptual Question 2.16

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### Part A

The figure represents the velocity of a particle as it travels along the  $x$ -axis. At what value (or values) of  $t$  is the instantaneous acceleration equal to zero?



ANSWER:

- ☒  $t = 1$  s
- ☐  $t = 0.5$  s and  $t = 2$  s
- ☐  $t = 0$

**Correct**

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## Conceptual Question 2.02

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### Part A

If the graph of the position as a function of time for an object is a horizontal line, that object cannot be accelerating.

ANSWER:

- ☒ True
- ☐ False

**Correct**

### Score Summary:

Your score on this assignment is 53.3%.

You received 5.33 out of a possible total of 10 points.