

NAME _____ PER. # _____ DUE, WEDNESDAY, 12/2/15.

STUDY GUIDE- S8P2.b QUIZ (FRIDAY, 12/4/15)

1. **Explain** the relationship between **kinetic and potential energies**. _____

2. The energy of **a bicycle accelerating down a hill** can **BEST** be **described** as:

A. increasing kinetic energy.

B. increasing potential energy.

C. 100% kinetic energy with no potential energy.

D. 100% potential energy with no kinetic energy.

EXPLAIN YOUR ANSWER: _____

3. As a rock falls off a cliff, the amount of **kinetic energy** _____. As the rock accelerates toward the ground, the amount of **potential energy** _____.

EXPLAIN YOUR ANSWER: _____

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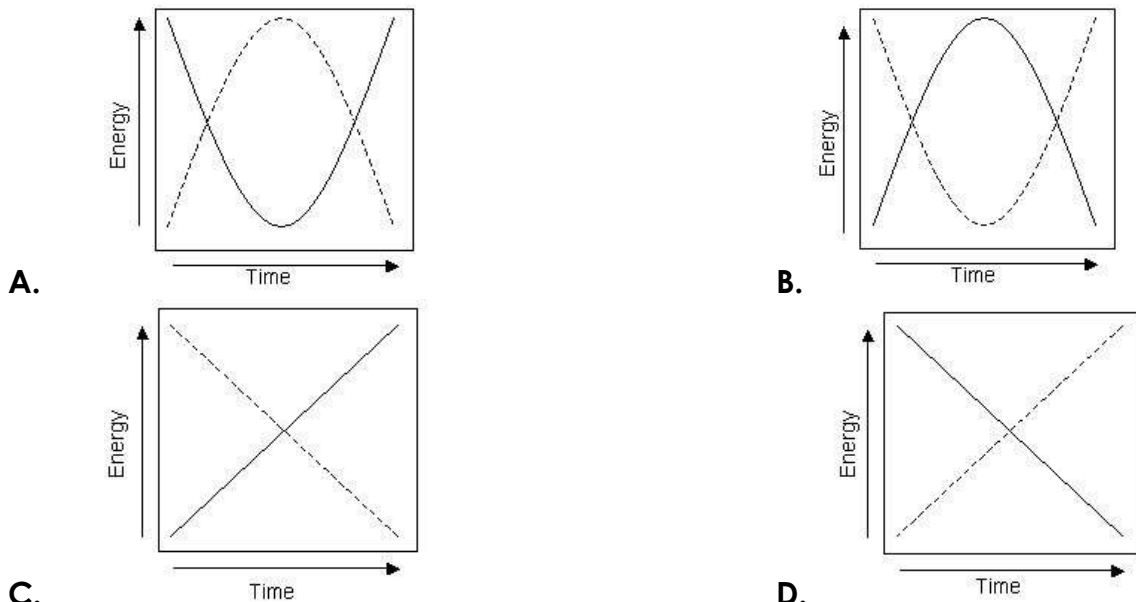
4. James and Juan were at the highest point in the football stadium, dropping water balloons on people below. Many of the balloons did not break, so the boys added more water to the balloons. **What impact did adding water have on the balloons' potential energy?**

- A) It had no impact; it just made the balloons bigger.
- B) The gravitational potential energy increased because the mass increased.
- C) The gravitational potential energy decreased because the diameter increased.
- D) The gravitational potential energy remained constant because they did not increase the height.

EXPLAIN YOUR ANSWER: _____

5. In the graph, the **dotted line represents potential energy** and the **solid line represents kinetic energy**.

Which graph **BEST** represents the **potential energy and kinetic energy** of a car as it **accelerates** onto the highway?



EXPLAIN YOUR ANSWER: _____

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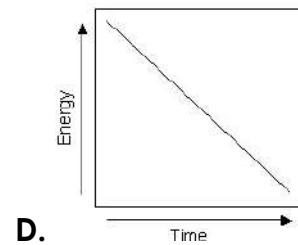
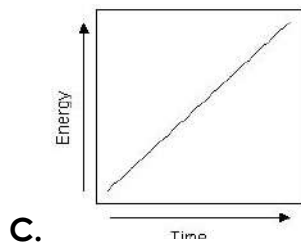
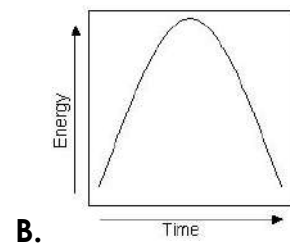
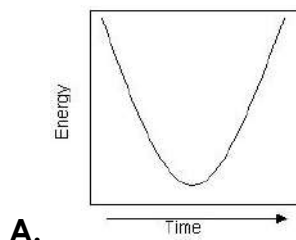
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6. A skateboarder is standing at the top of a tall ramp waiting to begin a trip. The skateboarder has:

- A. kinetic energy only.
- B. potential energy only.
- C. both kinetic and potential energies.
- D. neither kinetic energy nor potential energy.

EXPLAIN YOUR ANSWER: _____

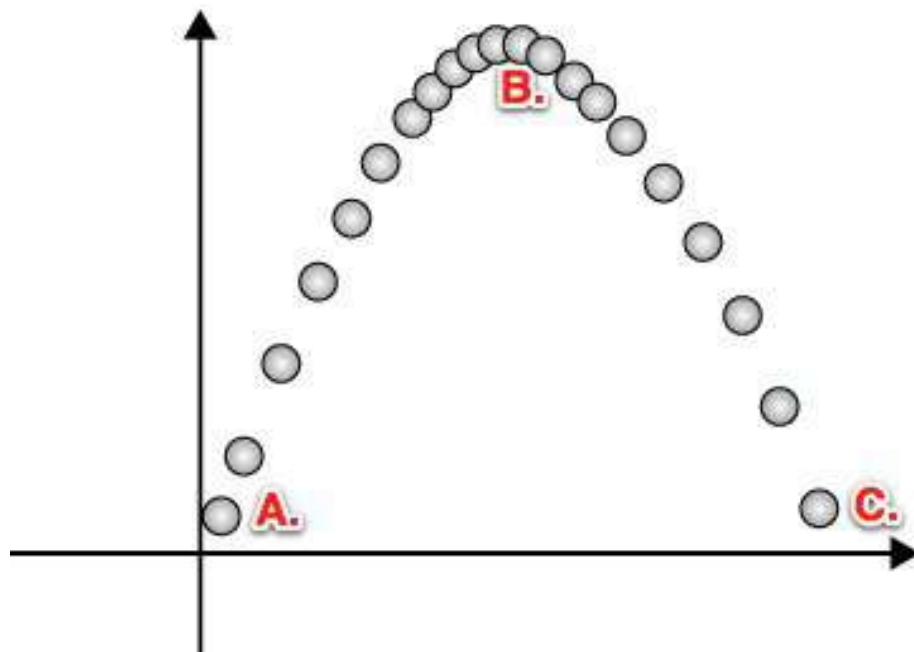
7. Which of these graphs BEST represents the kinetic energy of a roller coaster going around a loop?



EXPLAIN YOUR ANSWER: _____

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8.



A ball is projected into the air. Where is **potential energy** the **greatest**?

- A) A.
- B) B.
- C) C.
- D) A. and C.

EXPLAIN YOUR ANSWER: _____
