Build an Earthquake-resistant House!

Student quiz — Answer key

Directions: Choose the best answer for each question below.

1. What does an accelerometer measure?
   a. sound intensity in decibels
   b. light intensity in lux
   c. air pressure in pascals
   d. acceleration in meters per second squared

2. How does a base isolation system help a building stay standing during an earthquake?
   a. It isolates the base of the building from the movement of the ground.
   b. It makes the building's materials stronger.
   c. It sets off an alarm so people know to evacuate the building during an earthquake.
   d. None of the above.

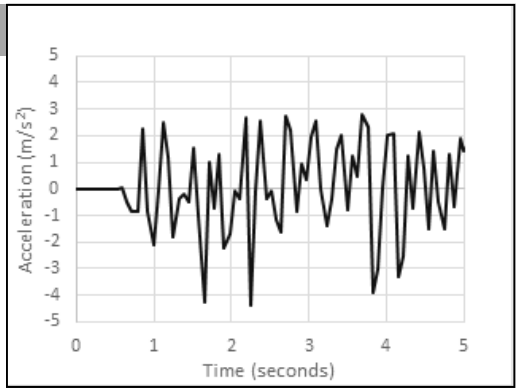
3. Making buildings earthquake-resistant is important because:
   a. Many large cities are in earthquake-prone areas.
   b. Earthquakes can cause serious structural damage to buildings or even cause them to collapse.
   c. Earthquakes can cause serious loss of human life.
   d. All of the above.

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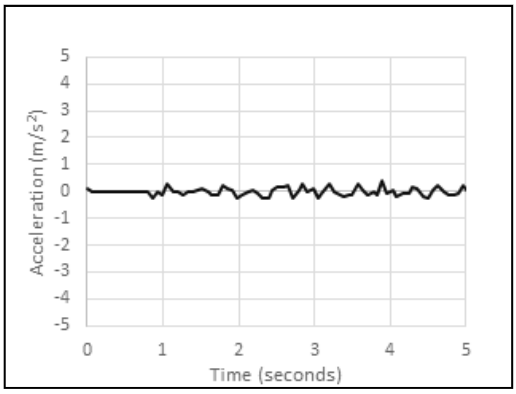
Directions: Choose the best answer for each question below.

4. The following two graphs show accelerometer data recorded from two adjacent buildings during an earthquake. The buildings are identical, except that one of them has an earthquake-resistant base and the other does not. Circle the graph from the building that does *not* have an earthquake-resistant base.

a.



b.



5. In this activity, what should a successful base isolation system do, when compared to a house with no base isolation?
   a. Decrease the average acceleration
   b. Not change the acceleration
   c. Increase the average acceleration
   d. Bring both the maximum and minimum acceleration closer to zero