

# Energy Review

## Example Problems

A 1.3 kg ball is thrown up in the air reaches a height of 1.2 m. What is the is potential energy of the ball?

The same ball is thrown at an initial velocity of 6 m/s. What is the kinetic energy of the ball?

A 0.001 kg penny falls from the top of a building that is 50 m tall.

What is the initial PE?

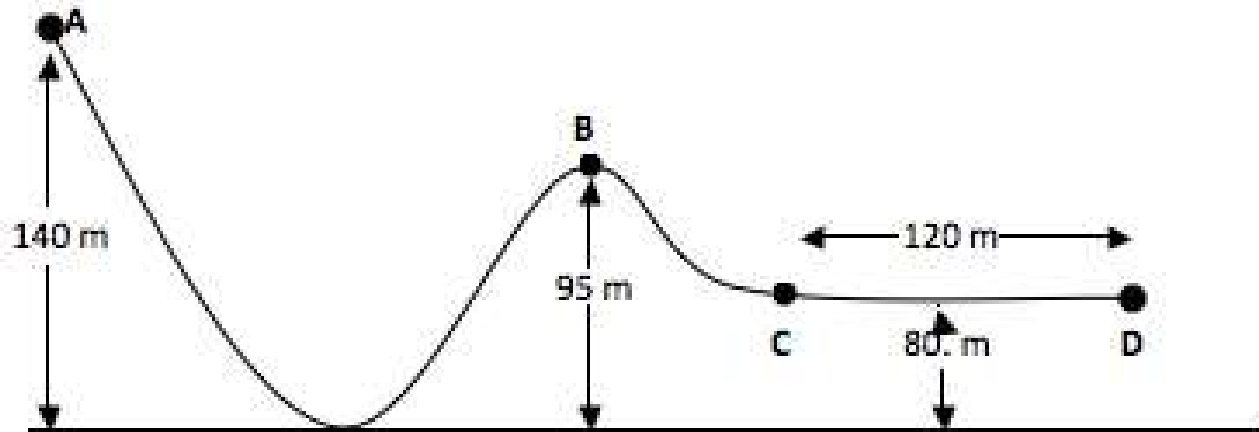
What is the total energy?

What is the KE when it hits the ground?

What is the velocity when it hits the ground?

# Energy at Each Point (Cart = 1000kg)

Figure 1:



## More Practice

- 1) A 100 kg roller coaster starts at the top of the hill at 60 m. What is the initial PE?
- 2) What is the total energy of the system?
- 3) The coaster reaches the lowest point. What is the KE now? Velocity?
- 4) The coaster goes back up to 10 m. What is the PE now? KE?

# Energy Review

A 75 kg person is at the top of a 40 m high roller coaster.

1. What is their potential energy?
2. What is the total energy of the system?
3. What is the kinetic energy at the bottom?
4. What is the velocity at the bottom?