

Conservation of Energy Answers

1.

- a) Y
- b) Y
- c) Y
- d) N
- e) N

2.

- a) Initial Potential Energy: 196 J; Initial Kinetic Energy: 0 J; Initial Total Energy: 196 J.
- b) Final Potential Energy: 0 J; Final Kinetic Energy: 196 J; Final Total Energy: 196 J.
- c) 14 m/s

3.

- 14 m/s

4.

- 15.3 m/s

5.

- 18.3 m/s (This is the final speed for all three scenarios: thrown upwards, downwards, and at an angle, given an initial speed of 10 m/s).

6.

- 48 m/s

7.

- a) 9.9 m/s
- b) 14 m/s
- c) 23.0 m/s
- d) 26.9 m/s