

Brett Robbins Academic Consulting

Physics 30 Practice Test

Unit A: Momentum & Impulse

5 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

A hockey puck with a mass of 0.16 kg is sliding across the ice at 25 m/s.

The magnitude of the momentum of the puck is

- A) 0.16 kg · m/s
- B) 25 kg · m/s
- C) 4.0 kg · m/s
- D) 1.6×10^2 kg · m/s

Question 2

A 0.40 kg ball moving at 12 m/s is caught and brought to rest by a player.

The magnitude of the impulse delivered to the ball is

- A) 4.8 N · s
- B) 3.0 N · s
- C) 0.40 N · s
- D) 30 N · s

Question 3

On a force – versus – time graph for an object, the area under the curve represents the

- A) work done on the object
- B) impulse experienced by the object
- C) power delivered to the object
- D) acceleration of the object

Question 4

A constant net force of 250 N acts on a crate for 0.80 s.

The magnitude of the impulse delivered to the crate is

- A) 31 N · s
- B) 3.1×10^2 N · s
- C) 20 N · s
- D) 2.0×10^2 N · s

Question 5

A 1.2 kg ball moving east at 5.0 m/s strikes a wall and rebounds directly west at 3.0 m/s.

The magnitude of the change in momentum of the ball is

A) 2.4 kg · m/s

B) 9.6 kg · m/s

C) 6.0 kg · m/s

D) 3.6 kg · m/s

Answer Key

- | | | |
|------|------|------|
| 1. C | 3. B | 5. B |
| 2. A | 4. D | |

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