Energy and Momentum — Practice Test

Ontario Physics, Grade 12, University Preparation (SPH4U) • 10 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **An object sliding with friction loses mechanical energy mainly as**

- A Light
- B Sound only
- C Thermal energy
- D Potential energy

Understand It with Pulse | Flag a mistake

2 **Momentum has both magnitude and direction because velocity is a**

- A Scalar
- B Vector
- C Force
- D Constant

Understand It with Pulse | Flag a mistake

3 **Two objects with equal momentum but different masses have speeds that are**

- A Directly related to mass
- B Equal
- C Zero
- D Inversely related to mass

Understand It with Pulse | Flag a mistake

4 **A force of 200 newtons acts for 0.05 seconds on a ball. The impulse, in newton seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Airbags reduce injury in a crash mainly by increasing collision time and reducing**

A Average force

B Momentum change

C Impulse

D Mass

Understand It with Pulse | Flag a mistake

6 **A ballistic pendulum uses conservation of momentum during collision and conservation of energy during the**

- A Collision
- B Impact only
- C Swing upward
- D Fall

Understand It with Pulse | Flag a mistake

7 **In a two dimensional collision, momentum is conserved separately in each**

- A Time interval
- B Object
- C Energy level
- D Direction

Understand It with Pulse | Flag a mistake

8 **A spring obeying Hooke law has force proportional to**

A Time

B Extension

C Extension^2

D Mass

Understand It with Pulse | Flag a mistake

9 **A spring of constant 50 newtons per metre stretched 0.4 metres exerts force, in newtons, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **Efficiency of a machine is useful energy output divided by total energy**

A Wasted

B Lost

C Input

D Stored

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**5.**	A	**9.**	20
2.	B	**6.**	C	**10.**	C
3.	D	**7.**	D		
4.	10	**8.**	B		

© 2026 Brett Robbins. All Rights Reserved.