NUNAVUT PHYSICS 30 · UNIT A · 5 QUESTIONS

# Momentum & Impulse — Practice Test

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**1** **A soccer ball flying above a green field. A golf ball with a mass of 0.045 kg is struck and leaves the club at 40 m/s. The magnitude of the momentum of the ball is**



A 3.6 kg · m/s

B 40 kg · m/s

C 1.8 kg · m/s

D $8.9 \times 10^2$ kg · m/s

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2 **The impulse experienced by an object is equal to the object's**

A change in momentum

B change in kinetic energy

C net force

D change in velocity

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3 **A 0.80 kg cart moving at 4.0 m/s collides with a stationary 1.2 kg cart on a frictionless track. The carts stick together. Their common speed immediately after the collision is**

A 4.0 m/s

B 1.6 m/s

C 3.2 m/s

D 2.0 m/s

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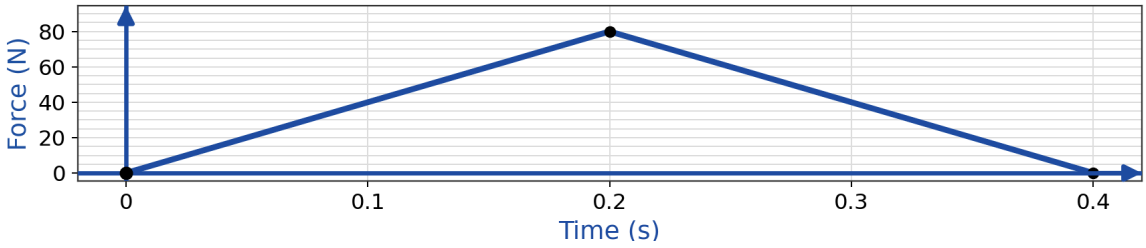
**4** **The graph shows the net force on a cart against time. The impulse delivered to the cart, in newton seconds, is _____**




ANSWER

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**5** **A 0.50 kg cart moving at 4.0 m/s undergoes an elastic collision with an identical stationary cart. The speed of the first cart immediately after the collision is**

A 2.0 m/s

B 4.0 m/s

C 2.8 m/s

D 0 m/s

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## ANSWER KEY

1. C
2. A
3. B
4. 16
5. D

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