MASSACHUSETTS PHYSICS · UNIT 1 · 5 QUESTIONS

Kinematics and Dynamics — Practice Test

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 **A red race car speeds up. An object starts from rest and accelerates at 5 m s² for 6 s. Its final speed is**



A 11 m/s

B 30 m/s

C 1.2 m/s

D 0.83 m/s

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2 An object moves at 4 m/s and accelerates at 3 $\frac{m}{s^2}$ for 2 s. Its displacement is

- **A** 14 m
- **B** 8 m
- **C** 20 m
- **D** 6 m

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3 Use g = 10 $\frac{m}{s^2}$. An object dropped from rest falls for 4 s. The distance it falls is

- **A** 40 m
- **B** 160 m
- **C** 80 m
- **D** 20 m

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4 **A 10 kg object is pushed with a net force of 40 N. Its acceleration is**

- **A** $400\ \frac{m}{s^2}$
- **B** $0.25\ \frac{m}{s^2}$
- **C** $50\ \frac{m}{s^2}$
- **D** $4\ \frac{m}{s^2}$

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5 **Use g = 10 $\frac{m}{s^2}$. The weight of a 12 kg object, in newtons, is ____**

ANSWER _____

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ANSWER KEY

1. B
2. A
3. C
4. D
5. 120

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