ARKANSAS PHYSICS · UNIT 1 · 10 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

Use 10 meters per second squared for gravity A ball is thrown straight up at 20 meters per second The maximum height reached by the ball is

- A 10 meters
- B 30 meters
- C 20 meters
- D 40 meters

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2 **A force of 40 newtons acts on a mass of 8 kilograms The acceleration produced is**

- A 3 meters per second squared
- B 8 meters per second squared
- C 10 meters per second squared
- D 5 meters per second squared

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3 **A mass of 12 kilograms rests on the ground Use 10 meters per second squared for gravity The weight of the mass is**

- A 120 newtons
- B 60 newtons
- C 180 newtons
- D 240 newtons

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4 **The coefficient of friction is 0.25 and the normal force on a crate is 80 newtons The maximum friction force on the crate is**

- A 10 newtons
- B 20 newtons
- C 30 newtons
- D 40 newtons

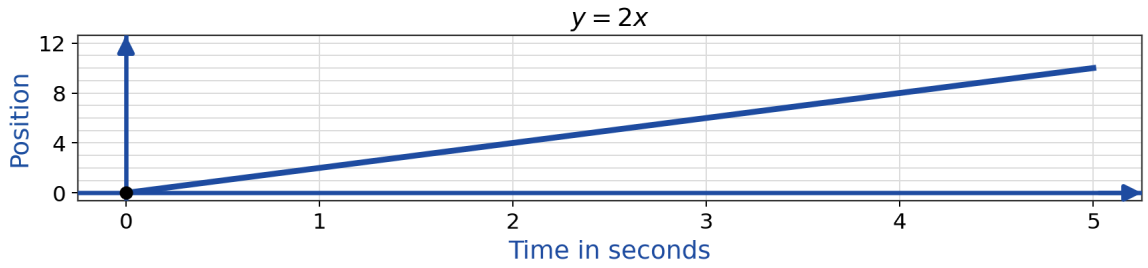
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5 **A sled is pulled north with 30 newtons and south with 18 newtons The net force on the sled is**

- A 12 newtons south
- B 48 newtons north
- C 12 newtons north
- D 48 newtons south

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6 **The graph shows position against time for a moving object The velocity of the object is**



- **A** 1 meter per second
- **B** 3 meters per second
- **C** 4 meters per second
- **D** 2 meters per second

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7 **When the net force on an object is zero, the object will**

- **A** Keep a constant velocity
- **B** Speed up steadily
- **C** Slow down steadily
- **D** Change direction only

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8 **A car is slowing down while moving east The direction of its acceleration is**

A East

B West

C North

D South

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9 **A ball is thrown straight up At the top of its flight its velocity is zero and its acceleration is**

A Zero

B Upward at 10 meters per second squared

C Downward at 10 meters per second squared

D Downward at 20 meters per second squared

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10 **A cyclist travels at a steady speed of 14 meters per second for 6 seconds What distance in meters does the cyclist cover**

ANSWER

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ANSWER KEY

1. C
2. D
3. A
4. B
5. C
6. D
7. A
8. B
9. C
10. 84

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