ALBERTA SCIENCE 10 · UNIT 2 · 10 QUESTIONS

Physics — 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 book rests on a shelf. If the book is moved to a shelf that is twice as high, its gravitational potential energy**

- A is halved
- B doubles
- C quadruples
- D does not change

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2 **A cup of hot chocolate is placed next to a cold metal spoon. Thermal energy will transfer**

A from the warmer object to the cooler object until both reach the same temperature

B from the cooler object to the warmer object until both reach the same temperature

C only if the two objects have the same mass

D in both directions at equal rates at all times

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3 **When a student rubs her hands together quickly, the mechanical (kinetic) energy of her hands is mainly converted into**

A potential energy

B electrical energy

C chemical energy

D thermal energy

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4 **A screw is best described as a modified form of which simple machine?**

- **A** lever
- **B** pulley
- **C** inclined plane
- **D** wheel and axle

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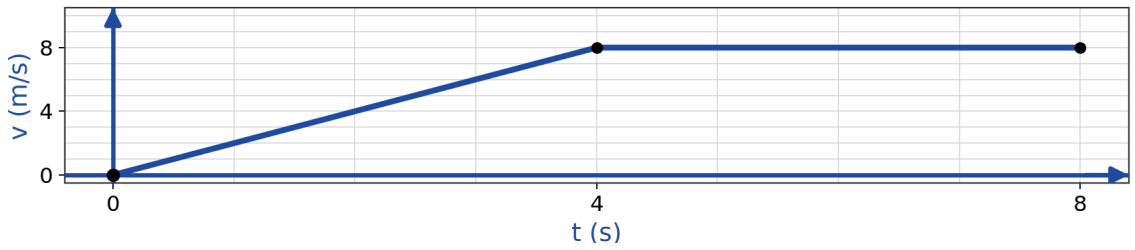
5 **The velocity-time graph shows a ball rolling along a level surface. The displacement of the ball during the first 8 s, in metres, is _____.**



ANSWER _____

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6 **An incandescent light bulb receives 60 J of electrical energy and produces 6.0 J of light energy. The efficiency of the bulb is**

- A 10%
- B 54%
- C 60%
- D 90%

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7 **A cyclist rides around a circular track at a constant speed. The cyclist is accelerating because**

- A her speed is increasing
- B her speed is decreasing
- C the direction of her velocity is continually changing
- D her mass is continually changing

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8 **A pulley system with an ideal mechanical advantage of 3 is used to lift a load of 900 N. The effort force required, in newtons, is _____.**

ANSWER _____

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9 **A roller coaster car moves along a track with very little friction. The car has its greatest gravitational potential energy**

A at the lowest point of the track

B at the highest point of the track

C where it is moving the fastest

D halfway down the first hill

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10 **A cyclist accelerates uniformly from 3.0 m/s to 15 m/s in 4.0 s. The acceleration of the cyclist, in metres per second squared, to the nearest tenth, is _____.**

ANSWER _____

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ANSWER KEY

1. B
2. A
3. D
4. C
5. 48
6. A
7. C
8. 300
9. B
10. 3

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