ALBERTA PHYSICS 20 · UNIT C · 5 QUESTIONS

Circular Motion, Work & Energy — 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 single blank red paper price tag with a white string lies flat on a plain white surface, no text, no numbers. A puck slides in a horizontal circle on a frictionless surface, held by a string. At any instant, the direction of the acceleration of the puck is**



A along the tangent, in the direction of motion

B toward the centre of the circle

C directly away from the centre of the circle

D zero, because the speed is constant

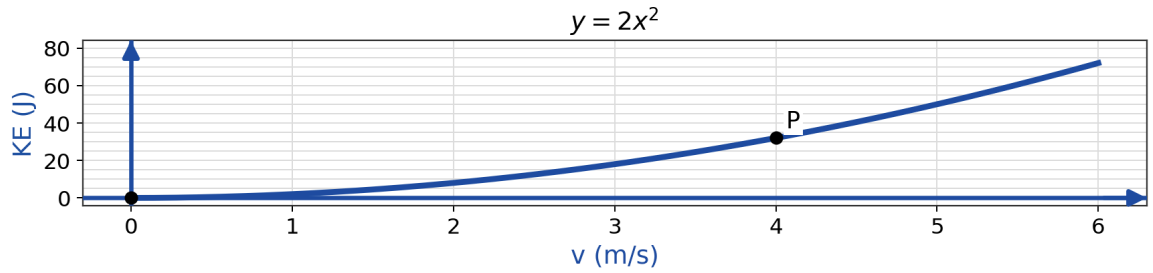
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2 **A force of 60 N pulls a sled at an angle of 60° above the horizontal. The sled moves 5.0 m horizontally. The work done by the pulling force is**

- A 150 J
- B 260 J
- C 300 J
- D 520 J

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3 **The graph shows kinetic energy against speed for a moving object. The kinetic energy of the object when its speed is 4.0 m/s is**



A 16 J

B 32 J

C 48 J

D 64 J

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4 **A turntable makes 30 revolutions in 45 s. The period of the rotation, in seconds and to the nearest tenth, is _____**

ANSWER _____

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5 **A machine uses 500 J of energy input to perform 400 J of useful work. The efficiency of the machine is**

A 20 %

B 125 %

C 80 %

D 0.80 %

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ANSWER KEY

1. B
2. A
3. B
4. 1.5
5. C

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