Quiz #6

1. The energy of a harmonic oscillator is ___ function of the number *n* of antinodes in its wavefunction.

A) an exponential **B) a linear** **C) a quadratic**

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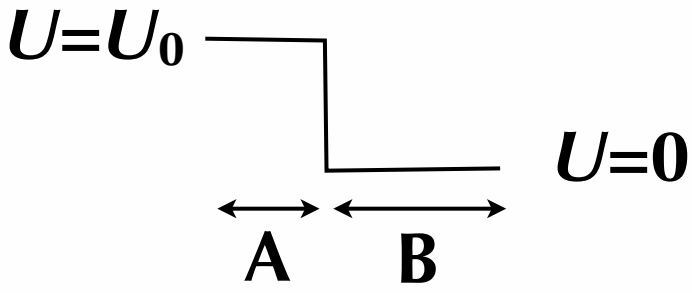
2. A particle with energy $E>U_0$ flies through this potential. In which region will it have the larger kinetic energy?



A) A **B) B** **C) Both the same**

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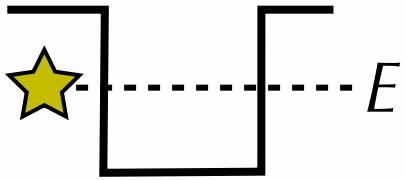
3. True or false: an electron trapped in this finite square well has a certain probability of being found at the position of the star.



A) true **B) false**

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4. t^2e^{ikx} is an eigenfunction of which of these operators?

A) x **B) $-i\hbar\, d/dx$** **C) $i\hbar\, d/dt$**

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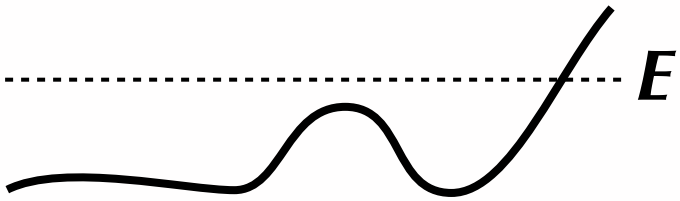
5. An electron in this potential with the energy given would be in a ____ state.



A) bound **B) unbound** **C) could be either**

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6. True or false: an unbound state has quantized energy levels.

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BBABBB

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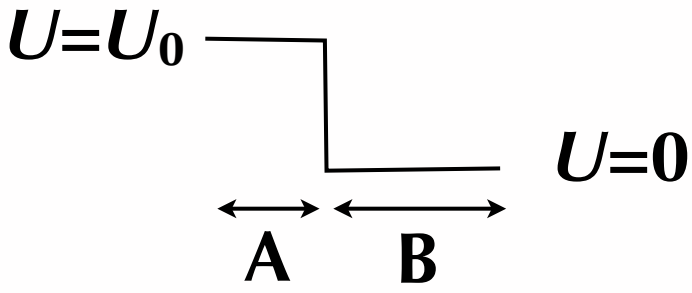

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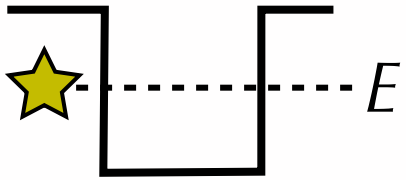

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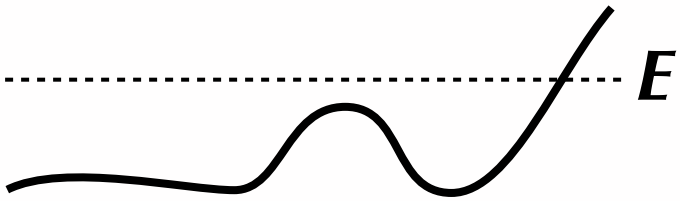

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