Test for a Bound States Calculation Lab

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1. For an infinite potential well the separation of the energy levels:
    a. Increases with increasing energy.
    b. Decreases with increasing energy.
    c. Stays the same.

2. For an infinite potential well:
    a. There is penetration of the wavefunction in the well.
    b. There is no penetration of the wavefunction in the well.

3. For a triangular well:
    a. The separation of the energy levels increases with energy
    b. The separation of the energy levels decreases with energy.
    c. The separation of the energy levels stays the same.

4. Solutions of an infinite triangular well resemble:
    a. Airy functions.
    b. Hermite polynomials.
    c. Legendre polynomials.

5. The higher energy states in a triangular potential well look more:
    a. As classical states.
    b. Resemble better quantum bound states.

6. The energy level separation in parabolic confinement is such that it:
    a. Increases with increasing energy.
    b. Decreases with increasing energy.
    c. Stays the same with increasing energy.

7. Solutions of a parabolic confinement resemble:
    a. Airy functions.
    b. Hermite polynomials.
    c. Legendre polynomials