



Name: _____

Period: _____

Assigned on Friday, December 05, 2025

15.3 The Bohr Model and Quantization

Due Monday, December 08, 2025

1. Who discovered that electrons are located in energy levels?

2. List seven colors of the visible light spectrum in increasing energy per photon.

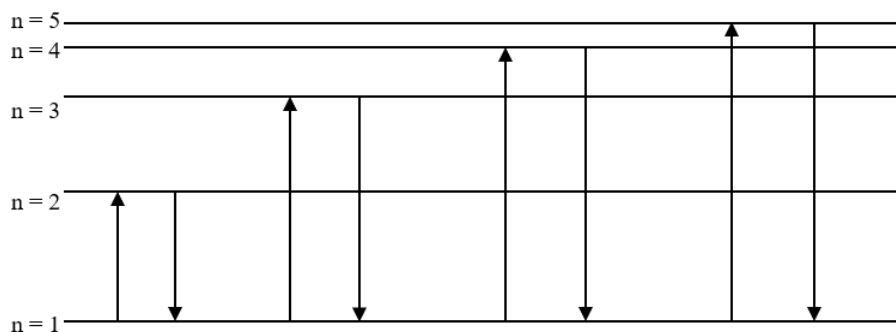
3. What does it mean to describe something as being quantized? _____

4. What is a bright-line spectrum? _____

5. Briefly explain why the bright-line spectrum of hydrogen is composed of specific lines of color and is not a continuous spectrum.

6. What is an energy level? _____

7. A certain element's bright-line spectrum contains red, yellow, blue, and violet. The emission and absorption lines are given below.



Which of the above changes corresponds to each of the following?

a. The **emission** of red light: $n = \underline{\hspace{1cm}}$ to $n = \underline{\hspace{1cm}}$

b. The **emission** of violet light: $n = \underline{\hspace{1cm}}$ to $n = \underline{\hspace{1cm}}$

c. The **emission** of blue light: $n = \underline{\hspace{1cm}}$ to $n = \underline{\hspace{1cm}}$

d. The **absorption** of the largest amount of energy: $n = \underline{\hspace{1cm}}$ to $n = \underline{\hspace{1cm}}$