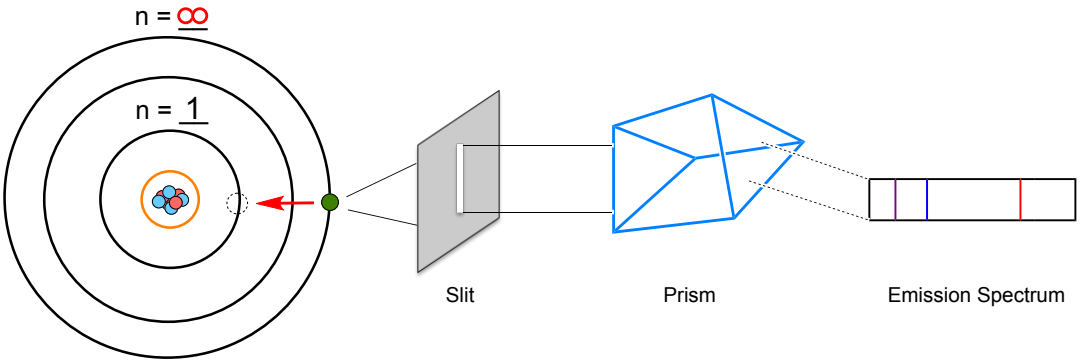
CONCEPT: EMISSION SPECTRUM (SIMPLIFIED)

● **Emission Spectra** is a series of lines formed when emitted light is focused by a slit and passed through a prism.



□ **Slit**: A long narrow cut used to spread closely packed wavelengths, which can later be measured.

□ **Prism**: Transforms _____ into discrete lines on an emission spectrum.

EXAMPLE: The lines in an atomic emission spectrum are due to:

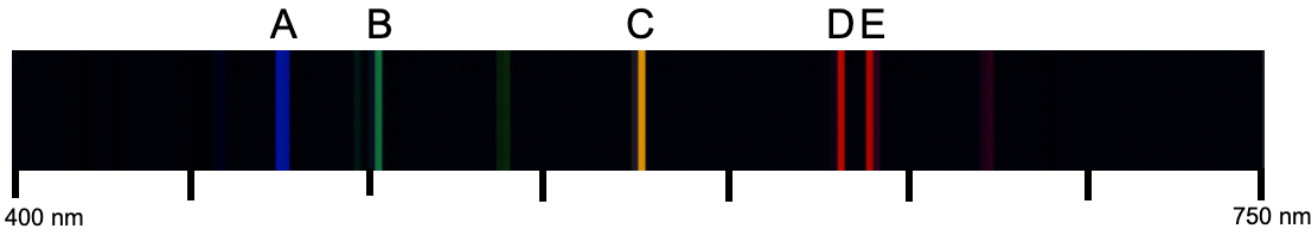
a) The presence of isotopes.

b) Movement of electrons from higher energy states to lower energy states in atoms.

c) Nuclear transitions in atoms.

d) Movement of electrons from lower energy states to higher energy states in atoms.

PRACTICE: The emission spectrum of helium is shown below. Which emission spectrum line has the highest energy?



a) Line A b) Line B c) Line C d) Line D e) Line E