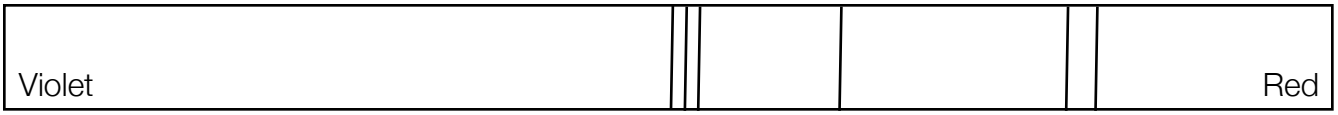
Name: _____ Period: _____

Comparing Galactic Spectra

Here is the laboratory (standard) spectrum for a particular element.

Here is the spectrum from a distant galaxy which contains that same element.



1. Describe how these two spectra differ from each other?

   _____

2. This galaxy's spectrum would be described as (circle one) **red-shifted** **blue-shifted**

3. What does a red-shifted spectrum tell you about the object? _____

4. What does a blue-shifted spectrum tell you about the object? _____

5. What is the difference between on object with a slightly shifted spectrum and one with a drastically shifted spectrum?

   _____

6. How would you describe the spectra of virtually all observable objects in the Universe?

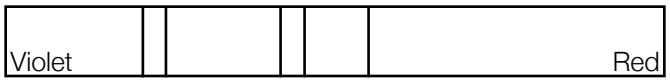
   _____

7. Explain how this observation supports the Big Bang theory.

   _____

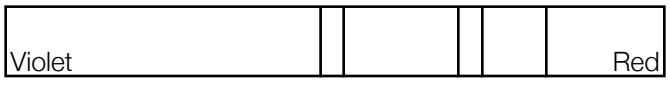
   _____

Standard Spectrum



Determine if the galaxy is approaching or receding based on its spectral lines. Circle your answer.

Galaxy #1



APPROACHING **RECEDING**

Galaxy #2

APPROACHING **RECEDING**

Galaxy #3

APPROACHING **RECEDING**