

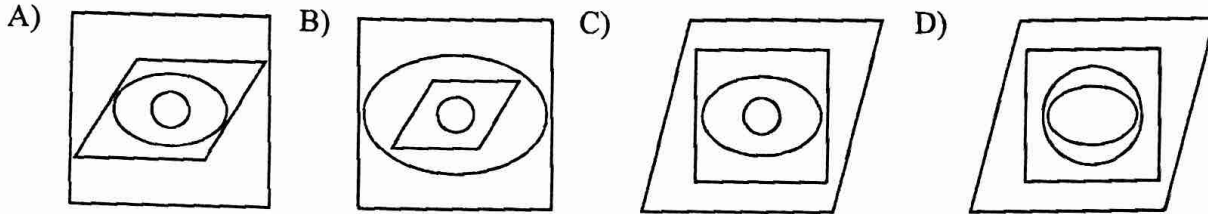
Name _____
 Date: _____

✓ Big Bang
 ✓ Red Shift

1. The symbols below are used to represent different regions of space.

Universe = □ Earth = ○ Galaxy = ▭ Solar system = ○

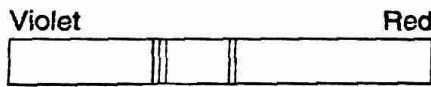
Which diagram shows the correct relationship between these four regions? [If one symbol is within another symbol, that means it is part of, or included in, that symbol.]



2. A blue shift of the light from a star indicates that the star

- A) will soon become a main sequence star
- B) will soon become a giant star
- C) is moving closer to Earth
- D) is moving away from Earth

3. Base your answer to the following question on The diagram below represents the bright-line spectrum for an element.



The spectrum of the same element observed in the light from a distant star is shown below.



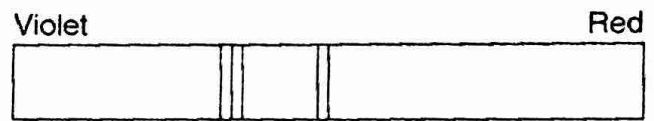
The shift in the spectral lines indicates that the star is moving

- A) toward Earth
- B) away from Earth
- C) in an elliptical orbit around the Sun
- D) in a circular orbit around the Sun

4. The theory that the universe is expanding is supported by the

- A) blue shift of light from distant galaxies
- B) red shift of light from distant galaxies
- C) nuclear fusion occurring in the Sun
- D) radioactive decay occurring in the Sun

5. Base your answer to the following question on The diagram below shows the spectral lines for an element.



Which diagram best represents the spectral lines of this element when its light is observed coming from a star that is moving away from Earth?

