

Name \_\_\_\_\_

## Measuring the Universe: The Distance to Stars and Galaxies

### Short Answer Key

1. The parallax method relies on observing a star from different positions in Earth's orbit, approximately six months apart, to measure its distance.
2. The brightness of Cepheid variable stars is determined by the period of pulsation, or how regularly they grow brighter and dimmer.
3. Supernovae are considered standard candles because they have a consistent and well-known brightness when they explode, making them useful for measuring distances to faraway galaxies.
4. The redshift of light from galaxies is directly related to their velocity and distance from us, as described by Hubble's Law.
5. The inverse square law is important because it relates the brightness of an object to its distance, allowing astronomers to calculate distance based on observed brightness.

