

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Division: \_\_\_\_\_

### Distances

#### Video Questions

1. By knowing the \_\_\_\_\_ between two cities and the \_\_\_\_\_ of the Sun shining down a well, and by applying \_\_\_\_\_, Eritosthenes was able to calculate the circumference of the Earth to be about \_\_\_\_\_ kilometers. For the first time, \_\_\_\_\_ had determined a \_\_\_\_\_ to the Universe.
2. Aristarchus of Samos' numbers weren't very accurate, but using his methods \_\_\_\_\_ and \_\_\_\_\_ calculated the distances between the Earth, the \_\_\_\_\_ and the \_\_\_\_\_, and also their \_\_\_\_\_. This was over \_\_\_\_\_ years before the invention of the \_\_\_\_\_.
3. In the 17<sup>th</sup> Century, \_\_\_\_\_ and \_\_\_\_\_ laid the mathematical groundwork for understanding \_\_\_\_\_.
4. The distance from the Earth to the Sun is the \_\_\_\_\_, or \_\_\_\_\_.
5. Astronomers used the transits of \_\_\_\_\_ and \_\_\_\_\_ to measure the distance from the Earth to the Sun more accurately, but because of blur from the \_\_\_\_\_ the numbers were still not very accurate. It wasn't until the 1960s that \_\_\_\_\_ bounced off of \_\_\_\_\_ allowed astronomers to precisely determine the value of the AU to be \_\_\_\_\_ kilometers.
6. Combining the images from our two eyes gives us what is called \_\_\_\_\_.
7. The apparent shift in position of a nearby object compared to more distant objects is called \_\_\_\_\_.
8. The first successful parallax measurement was in \_\_\_\_\_ with a star called \_\_\_\_\_ Cygni. It turned out to be \_\_\_\_\_ AUs away.
9. Finding the AU to be too small, astronomers developed the \_\_\_\_\_ to measure astronomical distances. It is equal to the distance that \_\_\_\_\_ travels in one \_\_\_\_\_. 61 Cygni, then, was a more palatable \_\_\_\_\_ light years away.
10. An even larger unit, the parsec (short for **parallax sector**) is equal to \_\_\_\_\_ light years.
11. The nearest star to us is \_\_\_\_\_ which is about \_\_\_\_\_ light years away.
12. By using spectroscopy to identify similar stars, we can compare their \_\_\_\_\_, which allows us to tell their \_\_\_\_\_.