

How far is a light-year?

An Astronomical Unit is the average distance from the Sun to the Earth which is nearly 93 million miles. For light to travel from the Sun to the Earth at 186,000 miles *per second* takes about 8 minutes and 20 seconds.

Astronomer Robert Burnham noticed that the number of inches in one mile is nearly equal to the number of AU (Astronomical Units) in one light-year (<1/2% difference).

One light-year = 5,865,696,000,000 miles (or 5.8 trillion miles)

One Astronomical Unit = 92,955,000 miles

There are about 63,103 AU in one L-Y

One mile is 5,280 feet or 63,360 inches.

Think of a spot one mile from where you are now. Picture that mile divided into one-inch segments, for instance, if you were to set 63,000 quarters (twenty-five cent coins) end-to-end on the ground. Then imagine that instead of being one inch segments, think of each coin as being the length of the Sun-Earth distance of 93,000,000 miles.

Or picture this: If you could drive a car to the Sun at 100 miles per hour, that would take more than 38,000 days of non-stop driving, or more than 106 years.

Even faster, Apollo 10 hit a record speed of 24,790 miles per hour while returning to Earth from the Moon. At that pace, travel to the Sun would take more than 5 months.

Sirius, our brightest nighttime star, is 8.4 light-years away, which at Apollo 10's fastest speed, would take more than 226 *thousand years*.

The numbers:

24,790 mph X 24 hours = distance in one day = 594,960 miles

365 X one day distance = 217,160,400 miles in one year

226,000 years X one year distance = 49,078,250,400,000 miles

(49 trillion, 78 billion, 250 million, 400 thousand miles)

Divide by 8.4 the distance to Sirius in light-years = 5.8 trillion miles in a light-year