

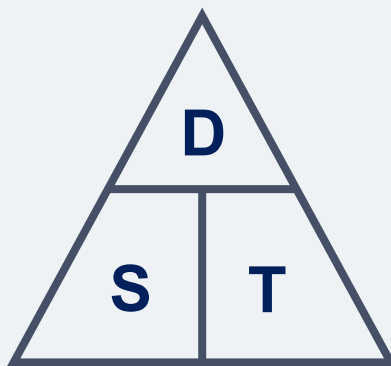


Distances to objects in space are very, very large. The nearest star (excluding the Sun), **Alpha Centauri**, is **41.32 trillion km**, or **41,320,000,000,000 km!!**

Therefore, astronomers use a **light-year** unit, which is the distance that light can travel in a year.

The speed of light is almost **300,000,000 (3 x 10⁸) m/s**.

Knowing this, we can calculate the distance of a light year.



D = Distance
S = Speed
T = Time

1. Rearrange the equation for distance:

2. Calculate the time in seconds of 1 year:

 s

Time in seconds of one year	=	days in one year	×	hours in one day	×	minutes in one hour	×	seconds in one minute
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3. 1 light year =

 m

4. How many light years away is Alpha Centauri?

 lyr