

One Light-Year Calculation Sheet

Calculating a Light-Year in Miles

Seconds in an hour:

1. 60 seconds per minute (x) 60 minutes per hour = 3,600 seconds per hour.

Seconds in a day:

2. 3,600 seconds per hour (x) 24 hours per day = 86,400 seconds per day.

Seconds in a year:

3. 86,400 seconds per day (x) 365 days a year = 31,536,000 seconds per year.

How far light travels in one year in miles:

4. 31,536,000 seconds per year (x) 186,000 miles per second (speed of light in miles) = 5,865,696,000,000 miles per year.

A light year in miles:

5. **5,865,696,000,000 miles per year = 1 light-year in miles.**

Calculating a Light-Year in Kilometers

Seconds in an hour:

1. 60 seconds per minute (x) 60 minutes per hour = 3,600 seconds per hour.

Seconds in a day:

2. 3,600 seconds per hour (x) 24 hours per day = 86,400 seconds per day.

Seconds in a year:

3. 86,400 seconds per day (x) 365 days a year = 31,536,000 seconds per year.

How far light travels in one year in kilometers:

4. 31,536,000 seconds per year (x) 300,000 kilometers per second (speed of light in kilometers) = 9,460,800,000,000 kilometers per year.

A light year in kilometers:

5. **9,460,800,000,000 kilometers per year = 1 light-year in kilometers**