

Light Years

A light year is the distance travelled by a beam of light in one year.

The distances between planets and stars are so great that we need to measure those distances by how long it takes a beam of light to travel those distances.

Light travels at a speed of 3×10^8 m/s

That is 300,000,000 metres in one second.



WolframAlpha™ computational knowledge engine

light year



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You can use an excellent web site called WolframAlpha to find out more about the light year. In fact we can use light minutes and light seconds to measure large distances.

Look up the web address shown and type into the question box the distances shown in the notes.

1

Find the distance in metres of

- A light minute
- A light second
- A light hour

2

Type in "Glasgow to Paris" and find the time it would take if you travelled at the speed of

- An aircraft
- A light beam
- A light beam through an optical fibre

3

Type "Earth to Moon" into the question box and record distance in

- in metres
- In light seconds
- In miles

4

Type "Earth to Sun" into the question box and record the distance

- In metres
- In light minutes

5

Find the distance in light years from Earth to

- Proxima Centauri (nearest star)
- Andromeda Galaxy