## SPREE RTO THE URIVERSE MTTEREST GROHP

## Astronomical distance units ${ }^{1}$

| How many | In one Kilometer | In one Mile | In one Astronomical Unit (AU) | In one Light Year | In one Parsec |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kilometers | 1 | 1.6090 | $\begin{gathered} 149,600,000 \\ (149.6 \text { million }) \end{gathered}$ | $9,461,000,000,000$ (9.461 trillion) | $\begin{aligned} & 30,86,000,000,000 \\ & \text { (30.860 trillion) } \end{aligned}$ |
| Miles |  | 1 | $\begin{gathered} 92,960,000 \\ (92.96 \text { million }) \end{gathered}$ | $\begin{aligned} & 5,879,000,000,000 \\ & (5.879 \text { trillion) } \end{aligned}$ | $\begin{aligned} & 19.170,000,000,000 \\ & 19.170 \text { trillion } \end{aligned}$ |
| Astronomical Units (AU) |  |  | 1 | 63,240 | 206,300 |
| Light Years |  |  |  | 1 | 3.2616 |

(To 4 significant figures only)

Astronomical Unit (AU): Distance from the Earth to the Sun. (Slightly simplified explanation)
Light Year: Distance light travels in one Earth year.
Parsec: Distance to an object which at which the Earth-Sun distance (i.e.1AU) would subtend an angle of one arcsecond. ( 60 arcseconds in one minute of arc, 60 minutes of arc in one degree).


## Distance examples (approximate)

Earth to The Moon: $384,000 \mathrm{~km}$ or 239,000 miles
Earth to the Sun: 1 Astronomical Unit
Neptune (outermost planet) to the Sun: 30 Astronomical Units
Sun to nearest star (Proxima Centauri) 4.2 Light Years
Diameter of our galaxy (Milky Way): 110,000 Light Years
Distance to the Andromeda Galaxy (nearest spiral galaxy): 2,540,000 (2.54 million) Light Years Diameter of the local group of galaxies: 10,000,000 (10 million) Light Years

Distance to the edge of the observable universe: 47,000,000,000 (47 billion) Light Years

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[^0]:    1 Information Sources: Wikipedia 14/01/2012 and Royal Astronomical Soc. Diary 2012

