

## Standard Form

1. Each of these large oil containers holds  $4.80 \times 10^8$  litres of the fuel. How many litres are there altogether in the full tanks shown ? Give your answer in scientific notation.



2 KU

2. A newspaper report stated "Concorde has now flown  $7.1 \times 10^7$  miles This is equivalent to 300 journeys from the earth to the moon." Calculate the distance from the earth to the moon. Give your answer in **scientific notation correct to 2 significant figures.**

3 KU

3. The planet Mars is at a distance of  $2.3 \times 10^8$  kilometres from the Sun. The speed of light is  $3.0 \times 10^5$  km per second. How long does it take light from the Sun to reach Mars ? **Give your answer to the nearest minute.**

3 KU

4. A planet takes 88 days to travel round the Sun. The approximate path of the planet round the Sun is a circle with diameter  $1.2 \times 10^7$  kilometres. Find the speed of the planet as it travels round the Sun.



**Give your answer in kilometres per hour, correct to 2 significant figures.**

4 KU

5. The mass of a proton is approximately  $1.8 \times 10^3$  times greater than the mass of an electron. If the mass of an electron is  $9.11 \times 10^{-31}$  kg, calculate the mass of a proton. Give your answer in **scientific notation correct to 2 significant figures.**

2 KU

6. Large distances in space are measured in light years. A camera on a space telescope, photographs a galaxy, a distance of 50 million light years away. One light year is approximately  $9.46 \times 10^{12}$  kilometres. Calculate the distance of the galaxy from the space telescope in kilometres. **Give your answer in scientific notation**

2 KU

7. The annual profit (£) of a company was  $3.2 \times 10^9$  for the year 1997. What profit did the company make per second. Give your answer to **three significant figures.**

2 KU

8. The total number of visitors to an exhibition was  $2.925 \times 10^7$ . The exhibition was open each day from 5 June to 20 September **inclusive**. Calculate the average number of visitors per day to the exhibition.

3 KU

9. The mass of the sun is  $2.2 \times 10^{30}$  kilograms. The mass of the earth is  $5.97 \times 10^{24}$  kilograms. Express the mass of the earth as a percentage of the mass of the sun. Give your answer in **scientific notation.**

3 KU