Standard Form

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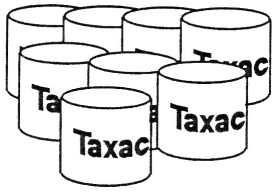
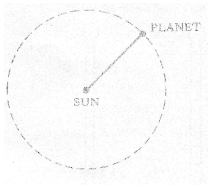
1. Each of these large oil containers holds 4.80×10^8 litres of the fuel.
How many litres are there altogether in the full tanks shown ?
Give your answer in scientific notation. 2 KU



2. A newspaper report stated
"Concorde has now flown 7.1×10^7 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 2.3×10^8 kilometres from the Sun.
The speed of light is 3.0×10^5 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 1.2×10^7 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 1.8×10^3 times greater than the mass of an electron.
If the mass of an electron is 9.11×10^{-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 9.46×10^{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 3.2×10^9 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 2.925×10^7.
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 2.2×10^{30} kilograms.
The mass of the earth is 5.97×10^{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