N5 Homework - Scientific Notation

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

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

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

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.
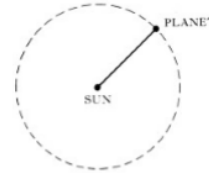
    Find the speed of the planet as it travels round the Sun.

    Give your answer in kilometres per hour, correct to 2 significant figures.   4

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

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

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

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

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