

Ex 6 Scientific Notation*Section A (Non-calculator)*

- 1 Work out –
- | | | | |
|----|----------------------|----|----------------------------|
| a) | 37×16 | e) | $66 \div (8 + 3)$ |
| b) | $1.836 \div 9$ | f) | $(10 \div 2)^2$ |
| c) | $6.15 - 8.2 + 13.04$ | g) | $\frac{8 \times 6}{3 + 9}$ |
| d) | 6×2^3 | h) | $6 + 27 \div 3 - 5$ |

Section B (Knowledge)
Only use your calculator if you need to!

- 2 The distance from Mercury to the sun is 5.79×10^7 kilometres.
Write this number out in full.
- 3 The diameter of a sodium atom is 0.0000003 millimetres.
Write this number in scientific notation.
- 4 The average mass of a pollen grain is 2.4×10^{-5} grams.
Write this number in full.

Section C (Mixed)

- 5 The workers in a supermarket were voting on a proposed pay offer.
 $\frac{5}{8}$ of the 368 workers voted to accept the offer. How many workers was this?
- 6 A cyclotron produces high speed particles.
A particle moving inside the cyclotron takes 6.4×10^{-10} seconds to travel 2.5×10^{-1} metres. Calculate the speed of the particle in metres per second.
- 7 Solve the equation - $9 + 5x = 17$
- 8 Large distances in space are measured in light years.
A camera on a space telescope photographs a galaxy, a distance of 40 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.
- 9 Work out –
- | | | | | | |
|----|------------------------------------|----|------------------------------------|----|----------------------------------|
| a) | $\frac{1}{4} + \frac{3}{8}$ | b) | $1\frac{3}{5} + 2\frac{1}{3}$ | c) | $\frac{11}{12} - \frac{1}{3}$ |
| d) | $3\frac{7}{10} - 1\frac{3}{8}$ | e) | $\frac{7}{20} \times \frac{4}{21}$ | f) | $\frac{3}{5} \div \frac{3}{4}$ |
| g) | $\frac{5}{12} \times \frac{8}{45}$ | h) | $2\frac{1}{3} \times 3\frac{1}{7}$ | i) | $3\frac{2}{5} \div \frac{4}{15}$ |