



National 5 Mathematics

Scientific Notation - Solutions

Marks are indicated in brackets after each question number

2019 Paper 2 Question 4, (2)

$$(3.6 \times 10^{-6}) \times 0.08 \\ = 2.9 \times 10^{-7}$$

The poppy seed weighs 2.9×10^{-7} kg

2023 Paper 2 Question 2, (3)

$$300 \div (6.64 \times 10^{-24}) \\ = 4.518 \times 10^{25} \\ = 4.52 \times 10^{25} \text{ to 3 significant figures.}$$

There are 4.52×10^{25} helium atoms

2024 Paper 2 Question 2, (3)

$$250 \times (1.22 \times 10^6) = 3.05 \times 10^8 \\ 3.05 \times 10^8$$

There are 3.05×10^8 ants

2025 Paper 2 Question 3, (2)

$$3.27 \times 10^{-22} \times 0.061 = 1.99 \times 10^{-23} \\ 1.99 \times 10^{-23}$$

The mass of one atom is 1.99×10^{-23} grams