Maths
Junior Certificate
Higher Level

Past Exam Questions on
Scientific Notation

Q3 Part (a) 2012 Paper 1

3. **(a)** Given that 1 billion is a thousand million, find the sum of €3·6 billion and €700 million.

Give your answer in the form $a \times 10^n$ where $n \in \mathbb{N}$ and $1 \leq a < 10$.

Q1 Part (b) 2011 Paper 1

(b) **(i)** The diameters of Venus and Saturn are $1{\cdot}21 \times 10^4$ km and $1{\cdot}21 \times 10^5$ km.

What is the difference between the diameters of the two planets?

Give your answer in the form of $a \times 10^n$ where $n \in \mathbb{Z}$ and $1 \leq a < 10$.

(ii) Write $\frac{\sqrt{3} \times 27}{3^2}$ in the form of 3^n where $n \in \mathbb{Q}$.

Q3 Part (a) 2010 Paper 1

3. **(a)** Write the reciprocal of 10 000 in the form 1×10^n, where $n \in \mathbf{Z}$.

Q1 Part (b) 2009 Paper 1

(b) **(i)** Given that $x = 2 \times 10^{-3}$ and $y = 7 \times 10^{-4}$, evaluate $x + 8y$.

Express your answer in the form $a \times 10^n$,

where $n \in \mathbf{Z}$ and $1 \leq a < 10$.

Q1 Part (b) (i) 2007 Paper 1

(b) (i) In 1981 the population of Peru was approximately $1 \cdot 8 \times 10^7$.

By 1988 the population had increased by 2·5 million.

What would be the approximate population of Peru in 1988?

Express your answer in the form $a \times 10^n$, where $n \in \mathbf{Z}$ and $1 \leq a < 10$.

Q1 Part (b) (i) 2005 Paper 1

(b) (i) Light travels at a speed of approximately $(2 \cdot 9 \times 10^5)$ km / sec.

How many kilometres will light travel in 8 minutes?

Express your answer in the form $a \times 10^n$,

where $n \in \mathbf{N}$ and $1 \leq a < 10$.