

Homework #49 - Applications of Scientific Notation

1) Students at Nassau Community College pay 1.585×10^4 dollars per year in tuition. Students at Hofstra University pay 6.4985×10^5 dollars per year in tuition. How many times greater is the tuition at Hofstra University? Write your answer in standard form.

$$\frac{6.4985 \times 10^5}{1.585 \times 10^4} = 4.1 \times 10^1$$

(41)

2) In 1985, the world population was 4.9×10^9 . In 2005, the world population grew to 6.4×10^{12} . How many more people were in the world in 2005 than in 1985? Write your answer in scientific notation.

$$6.4 \times 10^{12} - 4.9 \times 10^9$$

(6.3951 × 10¹²)

3) The weights, in ounces, of different animals are shown in the table below.

Part A:

What is the difference in weight between the elephant and the zebra?

Write answer in standard form.

$$9.28 \times 10^5 - 3.6 \times 10^5$$

$$5.68 \times 10^5$$

(568000)

Animal	Weight (ounces)
Elephant	9.28×10^5
Cat	1.28×10^2
Mouse	7.3×10^{-1}
Zebra	3.6×10^5

Part B:

How many times heavier than a cat is an elephant.

Write answer in scientific notation.

$$\frac{9.28 \times 10^5}{1.28 \times 10^2} = 7.25 \times 10^3$$