Name: _____

1. Convert the following numbers into scientific notation.

(a) 700 000

(b) 1 260 000 000

(c) 0.000 002

(d) 0.000 000 009 52

2. Convert the following numbers into numeral form.

(a) 8×10^7

(b) 3.21×10^6

(c) 4×10^{-8}

(d) 7.753×10^{-5}

3. Use a calculator to evaluate the following, given that:

$A = 3.2 \times 10^5$, $B = 4.5 \times 10^{-7}$, $C = 8.6 \times 10^{12}$

Give answers in scientific notation to one decimal place.

(a) ABC

(b) $\dfrac{2AB^2}{C^3}$

(c) $\sqrt{AB^3C^5}$

4. The mass of the Earth is 5.98×10^{24} kg.
The mass of the Moon is 7.36×10^{22} kg.
How many Moons would have the same mass as the Earth?

5. The population of a town is 7000 and is increasing by 4% each year.
Calculate the population in eight years.
Give answer to the nearest whole number.

6. The value of an $85 000 tractor was depreciating by 5% each year.
Calculate the value of the tractor in 10 years.
Give answer correct to the nearest dollar.

7. The population of bacteria on an item of food after it was taken out of a refrigerator could be calculated by the following formula:

$$N = 3000 \times 2.5^t$$

Where N = the number of bacteria
and t = the number of hours after it was taken out of the refrigerator

How many bacteria would be on the food after the following time periods?
(Give answer in scientific notation correct to one decimal place)

(a) 2 hours

(b) 36 hours

(c) 1 week