



Science Numeracy homework task – March.

Please attempt all questions. If you get stuck, please see your teacher for help before the deadline date or use the Numeracy guide available on Bathgate Academy's school website.

**RATIOS**

1. Express the following ratios in their SIMPLEST form.

a. 40 : 10                      b. 16 : 32                      c. 11 : 88

d. 9 : 81 : 36                      e. 15 : 40 : 35                      f. 2 : 0.4 : 1.2

2. A S2 class are growing micro-organisms in a petri dish. Below is a table showing the number of colonies of different micro-organisms

Name of Micro-organism	Number of colonies
E. Coli	4
Salmonella	3
Bacillus	12
Helicobacter	16

- a. What is the simplest ratio of Salmonella to Bacillus?  
b. What is the simplest ration of Bacillus to Helicobacter to E. Coli?

3. Scotland produces **100 Megajoules of energy from Coal** power stations and **75 MegaJoules of energy from Gas** power stations **every day**.

- a. Energy production from wind turbines is 4:1 times greater than energy production from Gas power stations. Calculate how much energy is produced from wind turbines over 1 week.

- b. Energy production from Hydro-electric power is 3:1 times greater than energy produced from Coal power stations. How much energy is produced from Hydro-electric power over the course of a year?