[](http://www.google.co.uk/imgres?imgurl=http://workoutenginepro.workoutengine.com/static/workoutenginepro/2011/09/idea.jpg&imgrefurl=http://www.missanisah.com/2012/11/eureka-moments.html&h=331&w=143&tbnid=tAgAuKofwsjdZM:&zoom=1&docid=RHJehdMD1lQeoM&ei=EJdaVMIM8JCxBLLTgpAF&tbm=isch&ved=0CD4QMygXMBc&iact=rc&uact=3&dur=444&page=1&start=0&ndsp=33)Science Numeracy homework task – March.

If I get stuck I can ask my teacher for help!

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.
2. 40 : 10 b. 16 : 32 c. 11 : 88

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

1. 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 |
| Bacillius | 12 |
| Helicobacter | 16 |

1. What is the simplest ratio of Salmonella to Bacillus?
2. 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**.
4. 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.
5. 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?