Week 1 Homework

1. Write 9000000 m in standard form

2. Write 13000 Hz in standard form

3. What is 2.74×10^7 J written in expanded form

4. Write 0.00049 in standard form

5. Calculate $10^{21} / 10^7$

6. Calculate $10^{-9} / 10^3$

7. Calculate $10^8 / 10^{-6}$

8. Calculate $10^{-5} / 10^{-12}$

9. Calculate $(6.8 \times 10^{11}) \times (2 \times 10^4)$ (give your answer in standard form to 1 decimal place)

10. Calculate $(1.2 \times 10^{-1}) / (8.9 \times 10^{-8})$ (give your answer in standard form to 1 decimal place)

11. How many mHz are there in 1 MHz?

12. How many µPa are there in 1 GPa?

13. How many Tg are there in 1 ng?

14. X-Rays have a frequency of 3×10^{17} Hz. If the speed of light is 3×10^8 m/s calculate the wavelength of the X-Rays. Give your answer using a power of 10 prefix.

15. A steel wire has a diameter of 50 µm. Calculate its cross-sectional area. Give your answer in m^2 using standard form to 1 decimal place.

Part 2

Memorise the powers of 10 prefixes on slide 7 of the powerpoint presentation