

Physics Summer Work 2018

If you are not sure of any answers you need to conduct sufficient research to complete your understanding. It is intended that you should find this work difficult. If you did not study Triple Science you will need to take extra care to ensure you are up to speed. Bring this sheet to your first lesson with Mr Redding/Mr Duffy-Turner.

Part 1: The Language of Physics: Complete the table

Key Term	Definition/Explanation
Speed	
Velocity	
Acceleration	
Distance	
Displacement	
Scalar	
Vector	
Force	
Energy	
Work	
Efficiency	
Tension	

Part 2: Recall of maths knowledge and concepts

- 1) What is Pythagoras theorem and where is this mathematical concept used? (List any equations used)
- 2) What is trigonometry and where is this mathematical concept used? (List any equations used)
- 3) What do each of the following words represent: milli, micro, nano, pico, kilo, mega, giga, tera?

Part 3: Manipulation of Equations

1. $E = \frac{FL}{Ax}$	Make F the subject	2. $E = \frac{FL}{Ax}$	Make x the subject
3. $A = \pi r^2$	Make r the subject	4. $\cos \theta = \frac{x}{y}$	Make y the subject
5. $\sin \theta = b$	Make θ the subject	6. $a^2 = b^2 + c^2$	Make b the subject
7. $s = ut + \frac{1}{2} at^2$	Make a the subject	8. $v = u + at$	Make a the subject

Part 4: Practice questions

- Go to <https://isaacphysics.org/>
- You will need to create an account.
- Then either follow the link: <https://isaacphysics.org/account?authToken=FT2FJM>
- Or go to the *teacher connections* tab on the *My Account* page and enter FT2FJM to join the class.
- Complete the set assignment.

Good luck,

Mr Duffy-Turner and Mr Redding.