Section 3: The constant acceleration formulae

Crucial points

1. **Make sure you know the constant acceleration formulae thoroughly**
   If you know the five equations this work is much easier.

2. **Make sure you choose to use an appropriate equation**
   Write down the values of whichever of *s, u, v, a* and *t* are given in the question. The equation to use is the one that includes only those variables whose values you are given in the question, together with the variable you wish to calculate.

3. **Check that you are using consistent units**
   If, for example, you are given a speed in kmh^{-1}, you must either convert this to ms^{-1} or work with times in hours, distances in km and acceleration in kmh^{-2}.

4. **Make sure you can solve simultaneous equations and quadratic equations confidently**
   These techniques may be required in some questions. This is basic Pure Maths and if you are not fluent with it you will be held back in all areas of maths. Make sure you practise these techniques thoroughly if you are not already confident with them.

5. **Don't confusing position and displacement**
   Position is displacement from the origin; displacement is displacement from initial position. The '*s*' in the *suvat* equations is displacement. If an object has initial position s_0, its final position will be $s_0 + s$.

6. **Sketch graphs or draw diagrams to help you solve problems where possible**
   Always be ready to sketch a graph or draw a diagram. Usually this will help give you a better understanding of the problem. See Example 2 in the Notes and Examples.