**Numerical Reasoning Tips**

**Useful Calculations:**

* **Percentage Increase** = new value – original value / original value x 100

E.g. £10 increase to £12 = 12-10/10 x 100 = 20%

* **Percentage Decrease** = original value – new value / original value x 100

E.g. £16 decrease to £10 = 16-10/16 x 100 = 37.5%

* **Finding X % of Y**

E.g. 5% of 100 = 100 x 0.05 **or** 45 % of 100 = 100 x 0.45

* **100% increase** = double
* **200% increase** = treble
* **X % increase**

E.g. 5% increase on 20 = 20 x 1.05 **or** 75% increase = 20 x 1.75

* **Finding 100% if X% = Y**

E.g. 10 = 5% so 100% = X 🡪 10 / 5 x 100 = 200

**Tips**

* Have any useful calculations that you don’t know written on a piece of paper that you can refer to quickly
* Have a piece of paper and some pens for writing key numbers
* Some tests have a practice test, but if not, it’s helpful to practise online so that you get used to doing the calculations just before your test begins.
* Use a scientific calculator – understand how to use brackets and power function to save time – also the ANS key is very useful to save re-typing numbers (it should recall the last calculation made)
* Re-read the question to make sure you have picked out the right data
* Watch out for little details that could cause you to get the answer wrong e.g. ‘to the largest whole number’ – if you calculate the answer at 11.6 and option A = 11.6, but option B = 12
* Watch out for thousands (k) and millions (m) – often they are not consistent in a table, so you have to convert them
* Watch out for the ‘cannot say’ answer option – if you think that the information needed to answer the question is missing then check for the ‘cannot say’ option
* Time manage the test (if you have 2 minutes per question, maybe allow an extra 30 seconds, after which you should move on to the next question)
* Sometimes it is possible to estimate numbers from the charts