8.3.2 – Testing and Error detection and Correction

This activity is designed to give you an understanding of how program code can be tested to identify and correct errors.

**Background Knowledge Needed:**

* Read pages 346 – 348 of textbook, and then answer the questions below.

# Achievement Levels

**Elementary:**

* What is the purpose of program testing?
* What is unit testing?

**Basic:**

* Name and briefly describe the three general types of programming errors. Provide **two** examples of each.

**Sound:**

* There is a range of strategies to detect and correct errors. These may include breakpoints, program stepping and variable tracking. Research **one** of these, giving a **detailed** explanation of how they work.

**Thorough:**

* Create some ActionScript 3 code which contains an example of each of the three general types of programming errors (described in the Basic level above). Take a screen snapshot of the code and label each error type. Make sure you give a brief explanation of why each is a good example of this type of error.

**Extensive:**

* Examine the following algorithm (pseudocode). Perform a deskcheck by watching the variables Number, Count and Temp. This will involve creating a list of the variables and their values through each step of the program. Show all working in your submitted document.
* What will be the **output** if the user enters 4? You may assume that each PRINT command starts on a new line. Be sure to record your answer accurately.

