**Introduction to R**

**Session 9: Writing functions**

1. The *factorial* of a non-negative integer *n* is defined to be

so for example, . Create a function that takes a non-negative integer as the argument and returns the factorial of the integer. (Hint: you can use a while loop, but there are many ways to do this). What is the value of 10! ?

1. The formula for converting a temperature in Fahrenheit (F) to Celsius (C) is:

Write a function that converts a Fahrenheit temperature to Celsius. Use this function to create a data frame containing Fahrenheit values 30, 31, 32, up to 100, and the corresponding temperatures in Celsius.

1. Obtain a root for the following function with the Newton-Raphson method:

(Hint: Implement the Newton-Raphson function given in the session 9 slides).