**R Cheat Sheet**

**install.packages(“”)**

**library( )**

**vectors – a list of items**

**c( )**

**<- to assign a name**

**numbers considered to be a double by default. Add ‘L’ to make an integer**

**e.g. c(1L, 2L, 3L)**

**characters and factors are both text vectors, but factors have levels and can be ordered (default is alphabetical order unless otherwise specified)**

**logical vectors – Boolean values TRUE and FALSE**

**explicit conversion**

**as.character**

**as.integer**

**as.numeric**

**class( ) to check class of vector type**

**functions – anything that takes one or more inputs and gives back an output**

**sum( ) obvious, but when used on a logical vector, counts the number of TRUEs**

**mean( )**

**length( ) – the numbers of values in a vector**

**rev( ) – reverses the order of a vector**

**unique( ) – returns only the unique elements**

**table( ) – counts how often each element appears and returns it as a table**

**sort( ) – returns the vector in order, either numerical or alphabetical**

**functions that make vectors**

**: creates vector from first number to last in steps of one**

**seq( ) – for steps other than one, used for double of integer vectors**

**e.g. seq(0, 1, by = 0.1)**

**rep( ) – to make vectors with a repeating sequence, using times or each argument**

**e.g. rep(1:3, times = 4) will give 1 2 3 1 2 3 1 2 3 1 2 3**

**rep(1:3, each = 4) will give 1 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4**

**applying operators to vectors – operator functions (+ - \* /) follow PEMDAS/BODMAS. 2 vectors of the same length will get paired one by one.**

**%/% integer division – number of times the second number divides into the first, to the nearest whole number.**

**%% mod- remainder when divided by a number**

**e.g. 10 %/% 3 = 3**

**10 %% 3 = 1**

**operators that make logical vectors**

**==**

**!=**

**<**

**>**

**<= or >=**

**%in%**

**logical input and output**

**! NOT - changes TRUE to FALSE and vice versa**

**& AND - returns TRUE if both sides of expression are TRUE**

**| OR - returns TRUE if either side is TRUE**

**named vectors**

**names( ) <- to add name to a vector**

**names(vector) to see names assigned to a vector**