

USER-DEFINED VECTOR MAKERS

1. Create a user-defined function "**`vec.maker.num()`**" that generates a vector of numbers. ***Do not use the function `vector()` inside of any of these user-defined functions!*** **`vec.maker.num()`** should have no formal arguments. When it is called, it should return a vector of 5 random numbers from the set {1,2,3,4,5,6,7,8,9,10}.
2. Create a user-defined function "**`vec.maker.alph()`**" that generates a vector of characters. **Here is a helpful tip:** the native R object '**`letters`**' returns the 26 lower-case letters of the alphabet as character elements. **`vec.maker.alph()`** should have no formal arguments. When it is called, it should return a vector of 5 random letters.
3. Create a user-defined function "**`vec.maker.bool()`**" that generates a vector of logical values (T's and F's). **`vec.maker.bool()`** should have no formal arguments. When it is called, it should return a vector of 5 random values of TRUE or FALSE.
4. Modify each of your three functions so that each accept an optional argument '**`len`**' which is the length of the vector (that is, the number of elements in the vector) that is returned. Let's say that the permissible range for the optional length argument value is from 5 to 20. As an optional argument, when the user does not include the **`len=`** argument when calling one of the vector maker functions, the function should still 'work' and return a vector of 5 elements by default.