1. Write the Excel VBA function that will return integers between 1 and 365. Name your function `randomDayOfYear()`.

```vba
Function randomDayOfYear() As Integer
    Dim theJulianDate As Integer
    theJulianDate = Int(Rnd * 365 + 1)
    randomDayOfYear = theJulianDate
End Function
```

2. Write the Excel VBA sub named `Birthdays17()`. Your VBA macro SUB will generate 17 different birthdays and place those 17 birthdays in ROWS 2 through row 18, in honor of highway 218, btw. Assume row one has a column heading, such as Birthdays or Birthday Julian Date. Use the `Cells(whatRow, whatColumn)` feature of Excel VBA macros along with a For Next loop to place the 17 birthdays in the proper locations, i.e. in rows 2 through 18 and column 1 of the spreadsheet will be where the 17 random birthday dates go. (Julian dates – 365 = December 31st and 33 = February 2nd, or Ground Hogs Day. `Birthdays17()` is the name of your SUB. A SUB is NOT a Function. A Sub is a procedure that does something. A SUB does NOT return a result, like all VBA Functions do.

```vba
Sub Birthdays17()
    ' Birthdays17 is the name of your SUB. A SUB is NOT a Function. A Sub is a procedure that does something.
    ' A SUB does NOT return a result, like all VBA Functions do.
End Sub
```
3. Write the Excel VBA function that will return a random integer between -20 and +20. Name your function `randomPatchLocation()`. It will be used in a game that randomly places NetLogo turtles on a grid where the X coordinates go from -20 to +20 and the Y coordinates also go from -20 to 20. The turtle world has 41 rows and 41 columns. There is a row 0 and a column 0. There are 41 integer numbers between -20 and +20, inclusive.

This function has NO arguments. You do NOT give the function any input. See question #4 here for an example of a function that does take arguments. #4 function `randomInteger()` takes TWO ARGUMENTS as its input.

Here is how you might use the function in a spreadsheet cell: 

```
= randomPatchLocation()
```

4. Write the Excel VBA function that takes arguments, also called parameters. It will accept TWO arguments. Name the 1<sup>st</sup> argument `lowInteger`. Name the 2<sup>nd</sup> argument `highInteger`. Your function can be named `randomInteger()`. Your function will return a random integer number between `lowInteger` and `highInteger`. So if `lowInteger` is 1 and `highInteger` is 6, it would simulate the rolling of a die or used twice, a pair of dice.

Examples of the use of this function: 

```
= randomInteger(1, 6)      = randomInteger(1, 365)  
= randomInteger(-20, 20)   = randomInteger(1, 100)
```