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Lab 2: R Fundamentals 2

```
1
n=12345
vec_1 = sample(12, n, replace = TRUE)
head(vec_1)
vec_2 <- vec_1==3
vec_2
data.frame(vec_1, vec_2)
```

2. It may be bad to do a visual inspection because you are only seeing TRUE or FALSE- not the actual integer value. It's possible when doing your own calculations for there to be a computer error or an individual's error in counting the number of TRUE's determined.

3. You don't always get the same count of 3 entries each time because every time you run the code for vec\_1 it is selecting 10 integers from 1-12. It is possible for the number of 3's that occur to change each time the vector is selected to run.

4. A logical test is a safe way to select entries with a value of 3 because you are assigning a specific integer (in this case 3) and for the time being, ignoring the other values. This function is stating that 3 is a true function and all other integers are false. This is specifically separating out the 3s from the other integers.

5. Performing logical "by hand" subsetting is a bad practice firstly and especially when working with large datasets, human error can cause many problems. When working with a large set and you want to subset a smaller amount of data, human error can cause many problems. It's possible to oversee, miss, replicate, etc. specific data points when subsetting. This can completely change your data as a whole and potentially change statistical analyses that may happen farther down the line. Additionally, when doing subsetting by hand, in R there are several ways to do the same function using different codes. This can make things messy if codes are inconsistent. It could also create potential issues from user to user if codes are not consistent and could create errors when trying to run a large code as a whole.

```
6.
for(i in 1:10)
{print(i)}
{print(i)}
(paste("This is loop iteration 1"))}
```

```
7.
n=13
for (i in 1:n)
{print(i)}
```

8.

```
n=17
```

```
vec_1=n
```

```
vec_1= sample(10, n, replace=TRUE)
```

```
  for(i in 1:n)
```

```
  {
```

```
    print(i)
```

```
  }
```

```
print(paste("The element at index ", i, "is ", sample(x=1:10, size=n, replace = TRUE)))
```

9.

```
n=12
```

```
create_and_print_vec=function(12, min=100, max=2000)
```

```
{ for(i in 1:n)
```

```
  print (i)
```

```
  print(paste("The element at index ", i, "is ", sample(x=1:10, size=n, replace = TRUE)))
```

```
}
```