1) I have two apples, one banana, one cherry.  **Does it make sense to calculate the "average" of these things?  Would you code that as a factor or a numeric value in R?**

Two apples, one banana, one cherry doesn’t make any sense to calculate “average”, I would like to code it as a factor.

2) I have four quiz scores: 94, 93, 85, and 0. **What is the mean (average) of my quiz scores? Would you code this as a factor or a numeric value in R?**

> scores=c(94,93,85,0)

> mean(scores)

[1] 68

> class(scores)

[1] "numeric"

As the result from R code, the mean of quiz scores is 68, I would like to code is as a numeric value for us compute the meaningful data.

3) In another class, I received these grades on my quizzes: two As, one B, and one F. **What is the mean (average) of my grades? Would you code that as a factor or a numeric value in R?**

In this case, I make

A as 1, B as 2,

C as 3, D as 4,

E as 5, F, as 6

> grades=c(1,1,2,6)

> mean(grades)

[1] 2.5

The result shows mean of grades is 2.5 which is between B and C, even we compute the mean result from numeric values, but I prefer using factor value for storing grades.

4) **How would you explain the difference in mean values obtained in #2 and #3 above?**

#2 gives us a specific number to get the average score directly, In #3, the grades is too abstract for computer to get the mean values, we have to convert it into numeric type to obtain the mean values.