學號:A106260093　　　　　姓名: 王緯華

(請依照規定)貼上執行程式碼及執行結果。
詳見: R 程式作業繳交方式
http://www.hmwu.idv.tw/web/teaching/doc/R-how-homework.pdf

```
> #ex2.24(a.1)
> set.seed(123456)
> score <- sample(1:100, 50, T)
> my.test <- function(score){
+
+     #成績及格人數達半數以上 (含)
+     pass <- length(which(score>=60))
+     all <- length(score)
+     pass >= (all/2)
+     #成績大於 90 分以上的
+     any(score>=90)
+     answer1 <- "本次成績不調分，平均為:"
+     average1 <- mean(score)
+
+
+     fail <- round((length(which(score<60))/length(score)),4)*100
+     answer2 <- "本次成績會調分, 不及格比例為:"
+     rate <- fail
+
+     sprintf("%s%.0f", answer1, average1)
+     sprintf("%s%.0f", answer2, rate)
+
+     answer3 <- ifelse(((pass >= (all/2))&any(score>=90)), sprintf("%s%.2f", answer1, average1),
+                            sprintf("%s%.2f", answer2, rate)
+     )
+
+     answer3
+ }
```

```
>
> my.test(score)
[1] "本次成績不調分，平均為:56.26"
>
> #ex2.24(a.2)
> set.seed(123456)
> score1 <- sample(1:100, 150, T)
> my.test1 <- function(score1){
+
+     #成績及格人數達半數以上 (含)
+     pass.1 <- length(which(score1>=60))
+     all.1 <- length(score1)
+     pass.1 >= (all.1/2)
+     #成績大於 90 分以上的
+     any(score1>=90)
+     answer1.1 <- "本次成績不調分，平均為:"
+     average1.1 <- mean(score1)
+
+
+     fail.1 <- round(((length(which(score1<60))/length(score1)),4)*100
+     answer2.1 <- "本次成績會調分, 不及格比例為:"
+     rate.1 <- fail.1
+
+     sprintf("%s%.0f", answer1.1, average1.1)
+     sprintf("%s%.0f", answer2.1, rate.1)
+
+     answer3.1 <- ifelse(((pass >= (all.1/2))&any(score1>=90)), sprintf("%s%.2f",
answer1.1, average1.1),
+                           sprintf("%s%.2f", answer2.1, rate.1)
+     )
+
+     answer3.1
+ }
>
> my.test1(score1)
[1] "本次成績會調分, 不及格比例為:50.67"
>
> #ex2.43(a1)   男生  175
```

```
> ComputeWeight <- function(ComputeWeight){
+     sex <- readline(prompt="請輸入性別，男生或是女生? ")
+     high <- readline(prompt="請輸入身高(cm)? ")
+     high <- as.numeric(high)
+
+     ComputeWeight <- if( sex == "男生"){
+         boy <- (high - 80)*0.7
+     }else{
+             girl <- (high - 70)*0.6
+             }
+
+     #ComputeWeight
+     cat("您的身高的標準體重為",ComputeWeight,"公斤")
+
+     }
>
> ComputeWeight()
請輸入性別，男生或是女生? 男生
請輸入身高(cm)? 175
您的身高的標準體重為  66.5  公斤
> #ex2.43(a2)    女生   166
> ComputeWeight <- function(ComputeWeight){
+     sex <- readline(prompt="請輸入性別，男生或是女生? ")
+     high <- readline(prompt="請輸入身高(cm)? ")
+     high <- as.numeric(high)
+
+     ComputeWeight <- if( sex == "男生"){
+         boy <- (high - 80)*0.7
+     }else{
+         girl <- (high - 70)*0.6
+     }
+
+     #ComputeWeight
+     cat("您的身高的標準體重為",ComputeWeight,"公斤")
+
+ }
>
> ComputeWeight()
```

請輸入性別，男生或是女生? 女生
請輸入身高(cm)? 166
您的身高的標準體重為 57.6 公斤
>