Quiz2

Q1. Suppose I define the following function in R

```
cube <- function(x, n) {
        x^3
}
```

What is the result of running

```
cube(3)
```

in R after defining this function?

```
cube <- function(x, n) {
  x^3
}
cube(3)
```

```
## [1] 27
```

Q2. The following code will produce a warning in R.

```
x <- 1:10
if(x > 5) {
        x <- 0
}
```

Why?

```
x <- 1:10
if(x > 5) {
        x <- 0
}
```

```
## Warning in if (x > 5) {: warunek posiada długość > 1 i tylko pierwszy
## element będzie użyty
```

Q3. Consider the following function

```
f <- function(x) {
        g <- function(y) {
                y + z
        }
        z <- 4
        x + g(x)
}
```

If I then run in R

```
z <- 10
f(3)
```

What value is returned?

```
f <- function(x) {
        g <- function(y) {
                y + z
        }
        z <- 4
        x + g(x)
}
z <- 10
f(3)
```

```
## [1] 10
```

Q4. Consider the following expression:

```
x <- 5
y <- if(x < 3) {
        NA
} else {
        10
}
```

What is the value of 'y' after evaluating this expression?

```
x <- 5
y <- if(x < 3) {
        NA
} else {
        10
}
y
```

```
## [1] 10
```

Q5. Consider the following R function

```
h <- function(x, y = NULL, d = 3L) {
        z <- cbind(x, d)
        if(!is.null(y))
                z <- z + y
        else
                z <- z + f
        g <- x + y / z
        if(d == 3L)
                return(g)
        g <- g + 10
        g
}
```

Which symbol in the above function is a free variable?

```
f
```