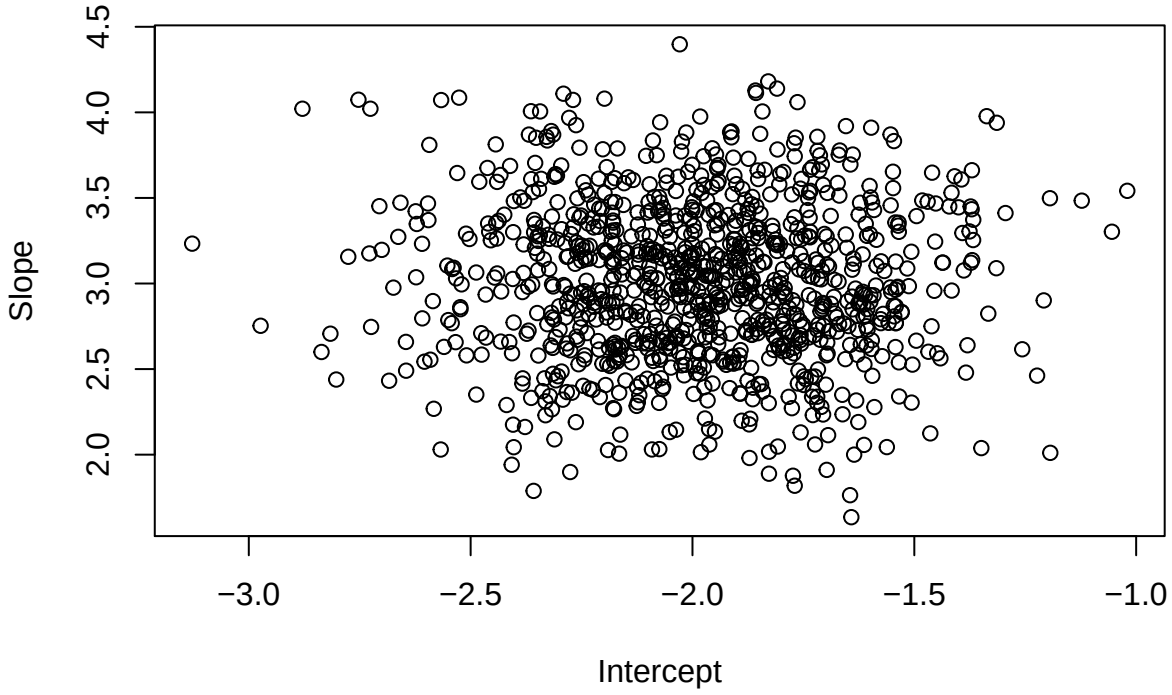
Propagating Monte Carlo Error

Team A7

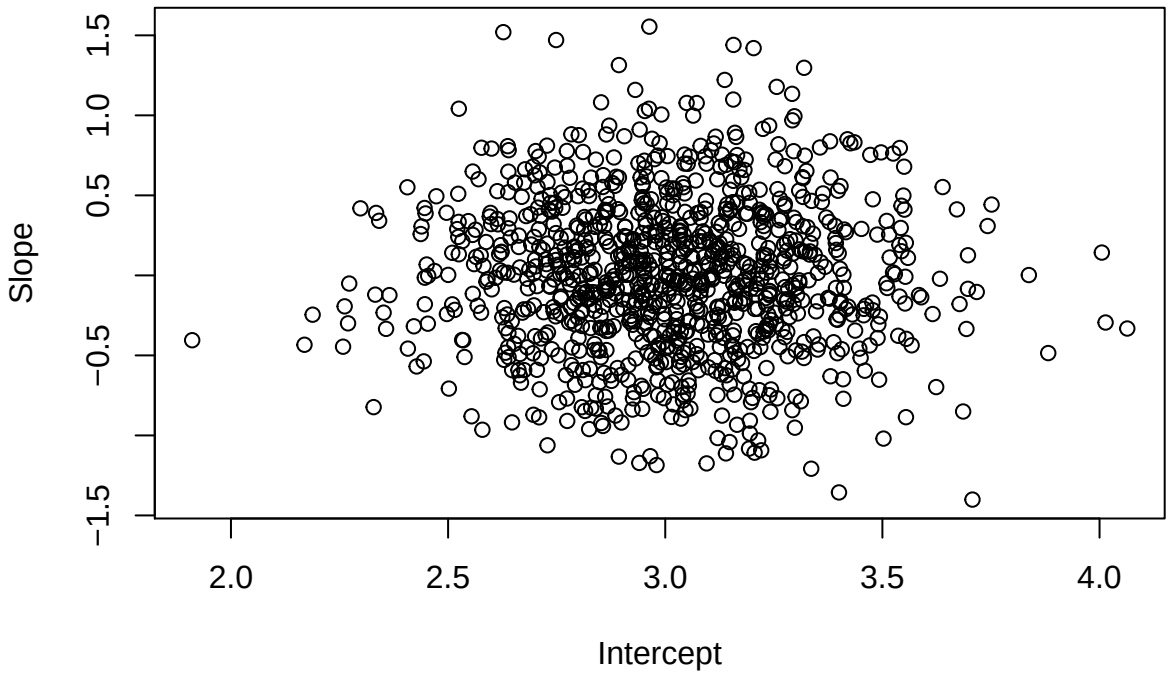
11/29/2018

The functions we are using to generate the fake data are: 1. f1(x) = -2 + 3x 2. f2(x) = 3 3. f3(x) = 6x^2 + 3x + 3

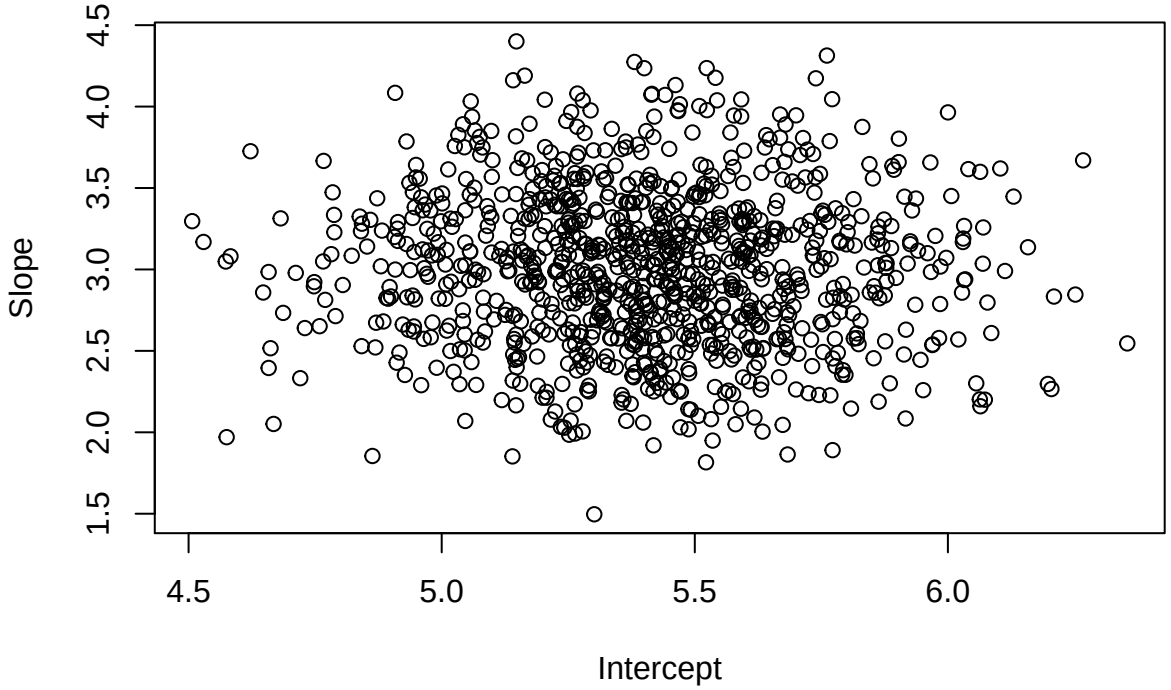
```
f1 <- function(x) -2 + (3*x)
f2 <- function(x) 3
f3 <- function(x) (6*(x**2)) + (3*x) + 3
f4 <-

makeFakeData <- function(f) {
    f(mytab[,1]) + rnorm(n = length(mytab[,1]), mean = 0, sd = 1)
}
```




```
## [1] Function number 1
## [1] Mean of the intercept: -1.98378546487731
## [1] Variance of the intercept: 3.00600031786443
## [1] Mean of the slope: 0.459386905436894
## [1] Variance of the slope: 0.304717037596909
## [1]
```

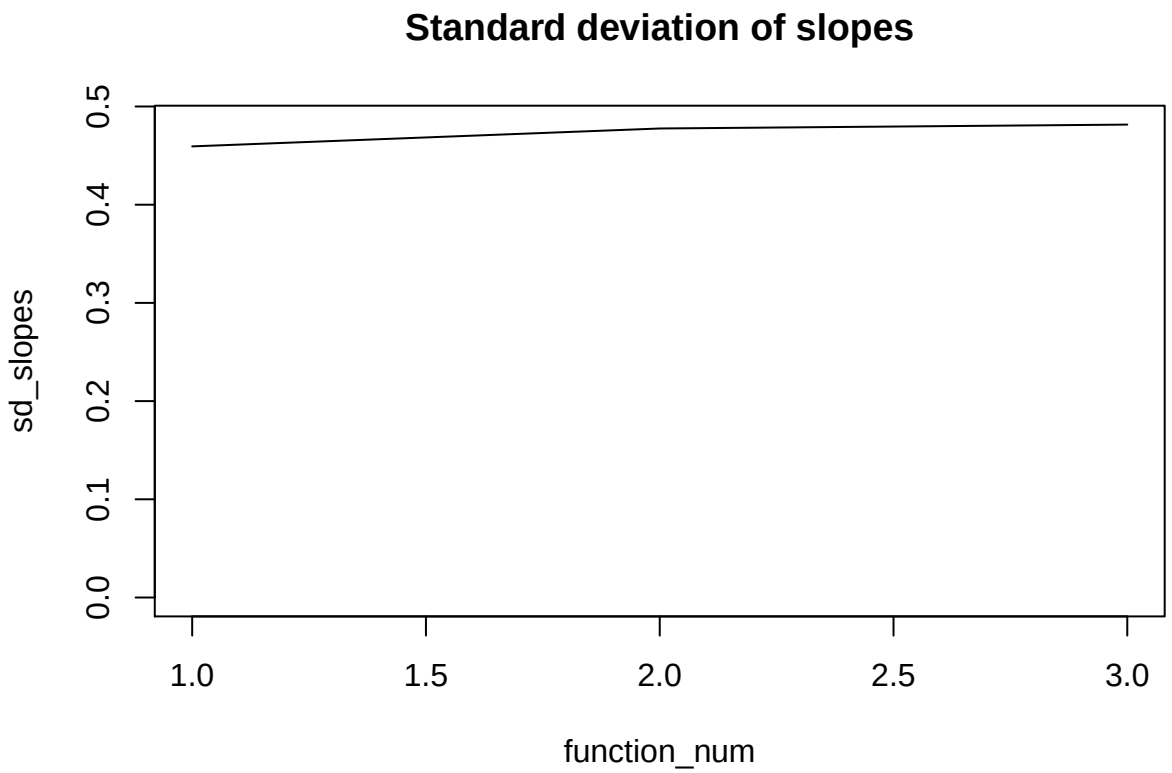


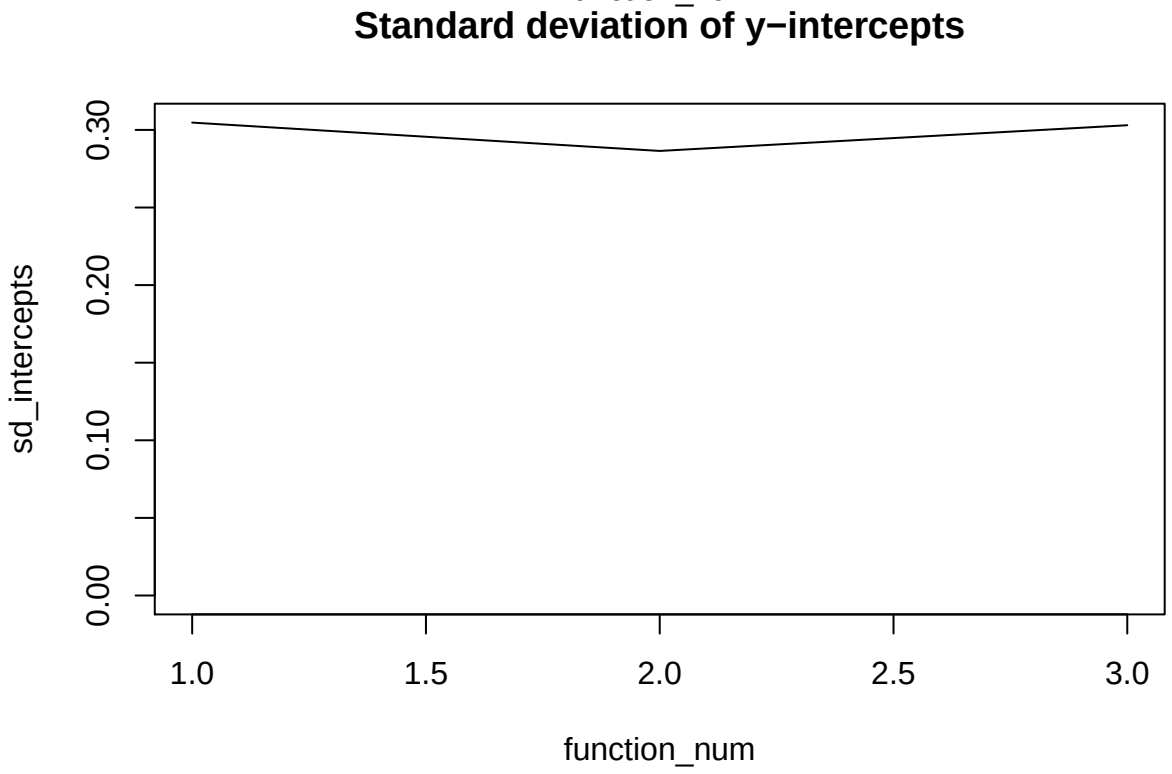

```
## [1] Function number 2
## [1] Mean of the intercept: 3.01047858349523
## [1] Variance of the intercept: -0.000806269288829194
## [1] Mean of the slope: 0.477611536707204
## [1] Variance of the slope: 0.286448576999076
## [1]
```

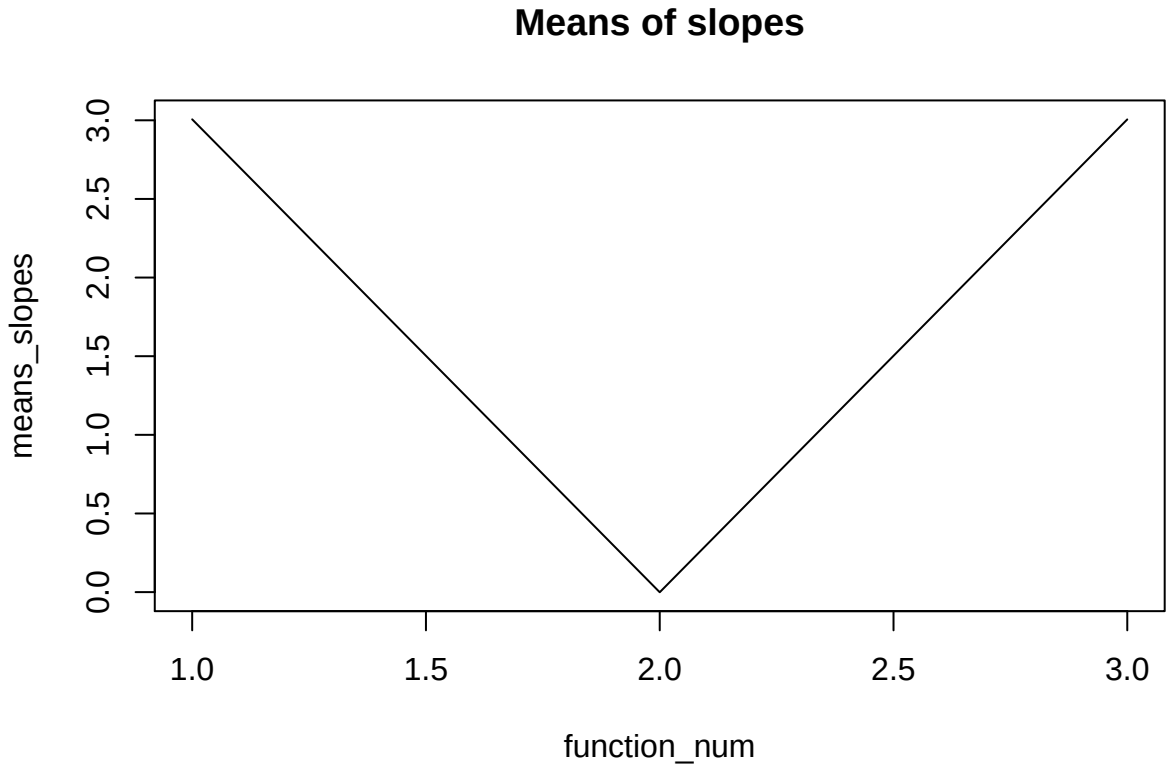


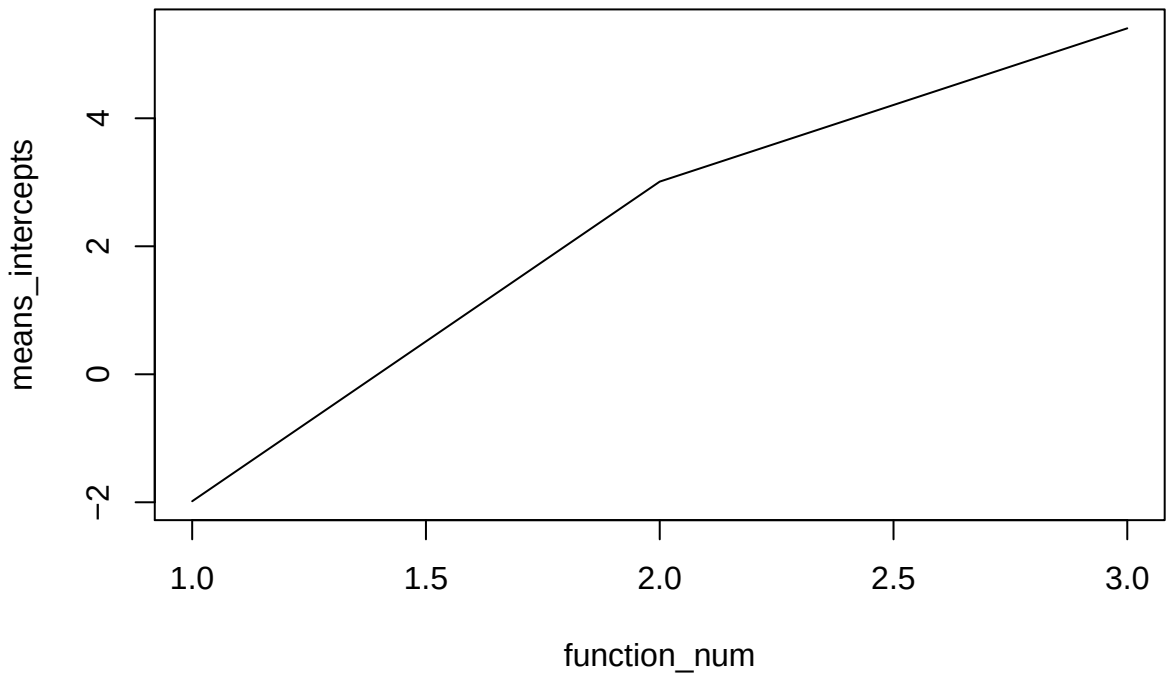

```
## [1] Function number 3
## [1] Mean of the intercept: 5.40519046718643
## [1] Variance of the intercept: 3.0056326076795
## [1] Mean of the slope: 0.48155476383055
```

```
## [1] Variance of the slope: 0.303020170876022
## [1]
```






Means of slopes
means_slopes
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1.0
1.5
2.0
2.5
3.0
function_num


Means of y−intercepts
means_intercepts
−2
0
2
4
1.0
1.5
2.0
2.5
3.0
function_num