(PART) Linear Regression

Simple Regression

```
options(scipen = 1, digits = 2)
library(ztable)
```

```
## Welcome to package ztable ver 0.1.5
```

```
op <- knitr::opts_knit$get("rmarkdown.pandoc.to")
options(ztable.type = op)
```

```
x <- rep(1:5, each = 4)
x2 <- x^2
y <- c(3, 5, 6, 9, 4, 6, 7, 10, 4, 6,
       8, 10, 5, 7, 9, 12, 7, 10, 12, 6)
y2 <- y^2
xy <- x*y
d <- data.frame(x = as.integer(x), x2, y, y2, xy)

s <- data.frame(x = sum(x), x2 = sum(x2), y = sum(y),
                y2 = sum(y2), xy = sum(xy))
mns <- data.frame(x = mean(x), x2 = "", y = mean(y),
                  y2 = "", xy = "")
d <- data.frame(rbind(d, s, mns))
cnames <- c('X', '$X^2$', 'Y', '$Y^2$', 'XY')
names(d) <-  cnames
z <- ztable(d, include.rownames = FALSE)
z <- addrgroup(z, rgroup = c(" ", "Sums", "Means"),
               n.rgroup = c(20, 1, 1), cspan.rgroup = 1)
z
```

X	X^2	Y	Y^2	XY
1.00	1	3.00	9	3
1.00	1	5.00	25	5
1.00	1	6.00	36	6
1.00	1	9.00	81	9
2.00	4	4.00	16	8
2.00	4	6.00	36	12
2.00	4	7.00	49	14
2.00	4	10.00	100	20
3.00	9	4.00	16	12
3.00	9	6.00	36	18
3.00	9	8.00	64	24
3.00	9	10.00	100	30
4.00	16	5.00	25	20
4.00	16	7.00	49	28
4.00	16	9.00	81	36
4.00	16	12.00	144	48
5.00	25	7.00	49	35
5.00	25	10.00	100	50
5.00	25	12.00	144	60
5.00	25	6.00	36	30
Sums				
60.00	220	146.00	1196	468
Means				
3.00		7.30		