

2018-03: No Matter How You Slice It

```
library(data.table)
library(stringi)
dt <- readLines("input.txt")
dt <- data.table(do.call(rbind, stri_match_all_regex(dt, "#([0-9]{1,4}) @ ([0-9]{0,4}),([0-9]{0,4})"),
colnames(dt) <- c("input", "id", "xPos", "yPos", "xSize", "ySize")
dt <- data.table(apply(dt[, 2:6], 2, as.numeric))
head(dt)
```

	id	xPos	yPos	xSize	ySize
1:	1	393	863	11	29
2:	2	675	133	15	26
3:	3	690	605	25	22
4:	4	342	752	19	17
5:	5	840	36	14	18
6:	6	671	653	10	23

Part 1

```
mat <- matrix(0, 1000, 1000)
for(x in 1:nrow(dt)) {
  xPos <- dt$xPos[x] + 1
  xSize <- dt$xSize[x] - 1
  yPos <- dt$yPos[x] + 1
  ySize <- dt$ySize[x] - 1
  mat[xPos:(xPos + xSize), yPos:(yPos + ySize)] <- mat[xPos:(xPos + xSize), yPos:(yPos + ySize)] + 1
}
length(mat[mat >= 2])
```

```
[1] 98005
```

Part 2

```
for(x in 1:nrow(dt)) {  
  xPos <- dt$xPos[x] + 1  
  xSize <- dt$xSize[x] - 1  
  yPos <- dt$yPos[x] + 1  
  ySize <- dt$ySize[x] - 1  
  if (all(mat[xPos:(xPos + xSize), yPos:(yPos + ySize)] == 1)) { print(x) }  
}
```

[1] 331