Books

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Document assignment Consider the following situation: Assignment 1 Haviland Wright September 12, 2018 A sloppy printer produces books with an average of 2 misprints per page. You want to know how many pages have more than k misprints in a book of n pages. Make an n x k table that shows the relationship between the total number of pages in a book and the number of pages with k misprints. Show and explain your work. Include equations and calculations to teach the reader how to solve the problem. Include an image of a book. Push your solution to a github repository and submit the url for repository on blackboard. Be sure your repo includes your document as a pdf file and as an RMD file. Include other files needed to recompile your document.

For the book of 100 pages

```
num_pages1<-100
data_misprint<-rpois(num_pages1,lambda = 2)
count_k<-c()
set.seed(2018)
for(k in 0:8){
  count<-0
  for(i in 1:num_pages1){
    if(k<data_misprint[i]){
      count<-count+1
    }
   }
  count_k[k]<-count
}
count_k
```

```
## [1] 52 27 10  4  2  0  0  0
```

```
page100<-data.frame((count_k))
```

For the book of 150 pages

```
num_pages2<-150
data_misprint<-rpois(num_pages2,lambda = 2)
count_k<-c()
set.seed(2018)
for(k in 0:8){
  count<-0
  for(i in 1:num_pages2){
    if(k<data_misprint[i]){
      count<-count+1
    }
   }
  count_k[k]<-count
}
count_k
```

```
## [1] 85 40 17  9  4  1  0  0
```

```
page150<-data.frame(count_k)
```

For the book of 200 pages

```
num_pages3<-200
data_misprint<-rpois(num_pages3,lambda = 2)
count_k<-c()
set.seed(2018)
for(k in 0:8){
  count<-0
  for(i in 1:num_pages3){
    if(k<data_misprint[i]){
      count<-count+1
    }
   }
  count_k[k]<-count
}
count_k
```

```
## [1] 117  62  25  13   6   2   1   0
```

```
page200<-data.frame(count_k)
```

For the book of 250 pages

```
num_pages4<-250
data_misprint<-rpois(num_pages4,lambda = 2)
count_k<-c()
set.seed(2018)
for(k in 0:8){
  count<-0
  for(i in 1:num_pages4){
    if(k<data_misprint[i]){
      count<-count+1
    }
   }
  count_k[k]<-count
}
count_k
```

```
## [1] 144  74  28  15   7   3   1   0
```

```
page250<-data.frame(count_k)
```

latex

$p = e^{-\lambda} * -\lambda/k!$ ##tabel

```
protable<-cbind(page100,page150,page200,page250)
knitr::kable(protable,row.names=c(1:8),col.names = c("page100","page150","page200","page250"))
```

```
## Warning in if (is.na(row.names)) row.names = has_rownames(x): the condition
## has length > 1 and only the first element will be used
```

```
## Warning in if (row.names) {: the condition has length > 1 and only the
## first element will be used
```

	page100	page150	page200	page250
1	52	85	117	144
2	27	40	62	74
3	10	17	25	28
4	4	9	13	15
5	2	4	6	7
6	0	1	2	3
7	0	0	1	1
8	0	0	0	0
## im	age#			

```
cover_url = 'https://www.incimages.com/uploaded_files/image/970x450/getty_883231284_2000133318188431824
if (!file.exists(cover_file <- 'cover2.jpg'))
download.file(cover_url, cover_file, mode = 'wb')
knitr::include_graphics(if (identical(knitr:::pandoc_to(), 'html')) cover_url else cover_file)
```