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.

book with 50 pages

```
##step 1 For one page, we use poisson distribution to caculate the probility of misprints greater than k
##step 2 For the book, we use binomial distribution to caculate the probibilty of 1:50 pages.
##step 3 Graphic
row_k<-vector(mode = "numeric",length = 0)
result<-rep(NULL,51)
misprint<-ppois(q = 0:20,lambda = 2,lower.tail = FALSE)
for(j in 1:21){
  for(i in 1:51){
    b<-misprint[j]
    row_k[i]<-pbinom(q = i, size = 50,prob = b)-pbinom(q = i-1, size = 50,prob = b)
  }
  result<-rbind(result,row_k)
}
table<-as.data.frame(result)
colnames(table)=paste(0:50,"pages",sep="")
rownames(table)=0:20
library(knitr)
kable(table)
```

	0pages	1pages	2pages	3pages	4pages	5pages	6pages	7pages	8pages	9pa
0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
2	0.0000001	0.0000009	0.0000071	0.0000397	0.0001743	0.0006248	0.0018765	0.0048192	0.0107459	0.0210
3	0.0037416	0.0152806	0.0407547	0.0798240	0.1224161	0.1530444	0.1603576	0.1436764	0.1117660	0.0763
4	0.1859251	0.2531735	0.2251399	0.1470295	0.0751807	0.0313388	0.0109484	0.0032707	0.0008483	0.0001
5	0.3653360	0.1507534	0.0406252	0.0080397	0.0012458	0.0001574	0.0000167	0.0000015	0.0000001	0.0000
6	0.1814396	0.0202458	0.0014753	0.0000790	0.0000033	0.0000001	0.0000000	0.0000000	0.0000000	0.0000
7	0.0519654	0.0013978	0.0000246	0.0000003	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
8	0.0117350	0.0000683	0.0000003	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
9	0.0023196	0.0000026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
10	0.0004152	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
11	0.0000682	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
12	0.0000104	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
13	0.0000015	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
14	0.0000002	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
15	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000

	0pages	1pages	2pages	3pages	4pages	5pages	6pages	7pages	8pages	9pa
16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
17	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
18	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
19	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000
20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000

latex

$p = e^{-\lambda} * -\lambda/k!$ $P(X = x) = \frac{n!}{k!(n-k)!}p^k(1-p)^{n-k}$ ##tabel

image

```
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)
```