

# Assignment\_3

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## 1. Import the data into R.

```
library(dplyr)
```

```
##  
## Attaching package: 'dplyr'  
  
## The following objects are masked from 'package:stats':  
##  
##   filter, lag  
  
## The following objects are masked from 'package:base':  
##  
##   intersect, setdiff, setequal, union
```

```
setwd("/Users/ChiYuChen/Data Analysis, Intro/Assignment 3")  
forestfires <- read.csv("forestfires.csv")  
forestfires
```

##	X	Y	month	day	FFMC	DMC	DC	ISI	temp	RH	wind	rain	area
## 1	7	5	mar	fri	86.2	26.2	94.3	5.1	8.2	51	6.7	0.0	0.00
## 2	7	4	oct	tue	90.6	35.4	669.1	6.7	18.0	33	0.9	0.0	0.00
## 3	7	4	oct	sat	90.6	43.7	686.9	6.7	14.6	33	1.3	0.0	0.00
## 4	8	6	mar	fri	91.7	33.3	77.5	9.0	8.3	97	4.0	0.2	0.00
## 5	8	6	mar	sun	89.3	51.3	102.2	9.6	11.4	99	1.8	0.0	0.00
## 6	8	6	aug	sun	92.3	85.3	488.0	14.7	22.2	29	5.4	0.0	0.00
## 7	8	6	aug	mon	92.3	88.9	495.6	8.5	24.1	27	3.1	0.0	0.00
## 8	8	6	aug	mon	91.5	145.4	608.2	10.7	8.0	86	2.2	0.0	0.00
## 9	8	6	sep	tue	91.0	129.5	692.6	7.0	13.1	63	5.4	0.0	0.00
## 10	7	5	sep	sat	92.5	88.0	698.6	7.1	22.8	40	4.0	0.0	0.00
## 11	7	5	sep	sat	92.5	88.0	698.6	7.1	17.8	51	7.2	0.0	0.00
## 12	7	5	sep	sat	92.8	73.2	713.0	22.6	19.3	38	4.0	0.0	0.00
## 13	6	5	aug	fri	63.5	70.8	665.3	0.8	17.0	72	6.7	0.0	0.00
## 14	6	5	sep	mon	90.9	126.5	686.5	7.0	21.3	42	2.2	0.0	0.00
## 15	6	5	sep	wed	92.9	133.3	699.6	9.2	26.4	21	4.5	0.0	0.00
## 16	6	5	sep	fri	93.3	141.2	713.9	13.9	22.9	44	5.4	0.0	0.00
## 17	5	5	mar	sat	91.7	35.8	80.8	7.8	15.1	27	5.4	0.0	0.00
## 18	8	5	oct	mon	84.9	32.8	664.2	3.0	16.7	47	4.9	0.0	0.00
## 19	6	4	mar	wed	89.2	27.9	70.8	6.3	15.9	35	4.0	0.0	0.00
## 20	6	4	apr	sat	86.3	27.4	97.1	5.1	9.3	44	4.5	0.0	0.00
## 21	6	4	sep	tue	91.0	129.5	692.6	7.0	18.3	40	2.7	0.0	0.00
## 22	5	4	sep	mon	91.8	78.5	724.3	9.2	19.1	38	2.7	0.0	0.00
## 23	7	4	jun	sun	94.3	96.3	200.0	56.1	21.0	44	4.5	0.0	0.00
## 24	7	4	aug	sat	90.2	110.9	537.4	6.2	19.5	43	5.8	0.0	0.00
## 25	7	4	aug	sat	93.5	139.4	594.2	20.3	23.7	32	5.8	0.0	0.00
## 26	7	4	aug	sun	91.4	142.4	601.4	10.6	16.3	60	5.4	0.0	0.00
## 27	7	4	sep	fri	92.4	117.9	668.0	12.2	19.0	34	5.8	0.0	0.00
## 28	7	4	sep	mon	90.9	126.5	686.5	7.0	19.4	48	1.3	0.0	0.00

##	29	6	3	sep	sat	93.4	145.4	721.4	8.1	30.2	24	2.7	0.0	0.00
##	30	6	3	sep	sun	93.5	149.3	728.6	8.1	22.8	39	3.6	0.0	0.00
##	31	6	3	sep	fri	94.3	85.1	692.3	15.9	25.4	24	3.6	0.0	0.00
##	32	6	3	sep	mon	88.6	91.8	709.9	7.1	11.2	78	7.6	0.0	0.00
##	33	6	3	sep	fri	88.6	69.7	706.8	5.8	20.6	37	1.8	0.0	0.00
##	34	6	3	sep	sun	91.7	75.6	718.3	7.8	17.7	39	3.6	0.0	0.00
##	35	6	3	sep	mon	91.8	78.5	724.3	9.2	21.2	32	2.7	0.0	0.00
##	36	6	3	sep	tue	90.3	80.7	730.2	6.3	18.2	62	4.5	0.0	0.00
##	37	6	3	oct	tue	90.6	35.4	669.1	6.7	21.7	24	4.5	0.0	0.00
##	38	7	4	oct	fri	90.0	41.5	682.6	8.7	11.3	60	5.4	0.0	0.00
##	39	7	3	oct	sat	90.6	43.7	686.9	6.7	17.8	27	4.0	0.0	0.00
##	40	4	4	mar	tue	88.1	25.7	67.6	3.8	14.1	43	2.7	0.0	0.00
##	41	4	4	jul	tue	79.5	60.6	366.7	1.5	23.3	37	3.1	0.0	0.00
##	42	4	4	aug	sat	90.2	96.9	624.2	8.9	18.4	42	6.7	0.0	0.00
##	43	4	4	aug	tue	94.8	108.3	647.1	17.0	16.6	54	5.4	0.0	0.00
##	44	4	4	sep	sat	92.5	88.0	698.6	7.1	19.6	48	2.7	0.0	0.00
##	45	4	4	sep	wed	90.1	82.9	735.7	6.2	12.9	74	4.9	0.0	0.00
##	46	5	6	sep	wed	94.3	85.1	692.3	15.9	25.9	24	4.0	0.0	0.00
##	47	5	6	sep	mon	90.9	126.5	686.5	7.0	14.7	70	3.6	0.0	0.00
##	48	6	6	jul	mon	94.2	62.3	442.9	11.0	23.0	36	3.1	0.0	0.00
##	49	4	4	mar	mon	87.2	23.9	64.7	4.1	11.8	35	1.8	0.0	0.00
##	50	4	4	mar	mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	0.00
##	51	4	4	sep	thu	92.9	137.0	706.4	9.2	20.8	17	1.3	0.0	0.00
##	52	4	3	aug	sun	90.2	99.6	631.2	6.3	21.5	34	2.2	0.0	0.00
##	53	4	3	aug	wed	92.1	111.2	654.1	9.6	20.4	42	4.9	0.0	0.00
##	54	4	3	aug	wed	92.1	111.2	654.1	9.6	20.4	42	4.9	0.0	0.00
##	55	4	3	aug	thu	91.7	114.3	661.3	6.3	17.6	45	3.6	0.0	0.00
##	56	4	3	sep	thu	92.9	137.0	706.4	9.2	27.7	24	2.2	0.0	0.00
##	57	4	3	sep	tue	90.3	80.7	730.2	6.3	17.8	63	4.9	0.0	0.00
##	58	4	3	oct	sun	92.6	46.5	691.8	8.8	13.8	50	2.7	0.0	0.00
##	59	2	2	feb	mon	84.0	9.3	34.0	2.1	13.9	40	5.4	0.0	0.00
##	60	2	2	feb	fri	86.6	13.2	43.0	5.3	12.3	51	0.9	0.0	0.00
##	61	2	2	mar	sun	89.3	51.3	102.2	9.6	11.5	39	5.8	0.0	0.00
##	62	2	2	mar	sun	89.3	51.3	102.2	9.6	5.5	59	6.3	0.0	0.00
##	63	2	2	aug	thu	93.0	75.3	466.6	7.7	18.8	35	4.9	0.0	0.00
##	64	2	2	aug	sun	90.2	99.6	631.2	6.3	20.8	33	2.7	0.0	0.00
##	65	2	2	aug	mon	91.1	103.2	638.8	5.8	23.1	31	3.1	0.0	0.00
##	66	2	2	aug	thu	91.7	114.3	661.3	6.3	18.6	44	4.5	0.0	0.00
##	67	2	2	sep	fri	92.4	117.9	668.0	12.2	23.0	37	4.5	0.0	0.00
##	68	2	2	sep	fri	92.4	117.9	668.0	12.2	19.6	33	5.4	0.0	0.00
##	69	2	2	sep	fri	92.4	117.9	668.0	12.2	19.6	33	6.3	0.0	0.00
##	70	4	5	mar	fri	91.7	33.3	77.5	9.0	17.2	26	4.5	0.0	0.00
##	71	4	5	mar	fri	91.2	48.3	97.8	12.5	15.8	27	7.6	0.0	0.00
##	72	4	5	sep	fri	94.3	85.1	692.3	15.9	17.7	37	3.6	0.0	0.00
##	73	5	4	mar	fri	91.7	33.3	77.5	9.0	15.6	25	6.3	0.0	0.00
##	74	5	4	aug	tue	88.8	147.3	614.5	9.0	17.3	43	4.5	0.0	0.00
##	75	5	4	sep	fri	93.3	141.2	713.9	13.9	27.6	30	1.3	0.0	0.00
##	76	9	9	feb	thu	84.2	6.8	26.6	7.7	6.7	79	3.1	0.0	0.00
##	77	9	9	feb	fri	86.6	13.2	43.0	5.3	15.7	43	3.1	0.0	0.00
##	78	1	3	mar	mon	87.6	52.2	103.8	5.0	8.3	72	3.1	0.0	0.00
##	79	1	2	aug	fri	90.1	108.0	529.8	12.5	14.7	66	2.7	0.0	0.00
##	80	1	2	aug	tue	91.0	121.2	561.6	7.0	21.6	19	6.7	0.0	0.00
##	81	1	2	aug	sun	91.4	142.4	601.4	10.6	19.5	39	6.3	0.0	0.00
##	82	1	2	aug	sun	90.2	99.6	631.2	6.3	17.9	44	2.2	0.0	0.00

## 83	1 2	aug tue	94.8	108.3	647.1	17.0	18.6	51	4.5	0.0	0.00
## 84	1 2	aug wed	92.1	111.2	654.1	9.6	16.6	47	0.9	0.0	0.00
## 85	1 2	aug thu	91.7	114.3	661.3	6.3	20.2	45	3.6	0.0	0.00
## 86	1 2	sep thu	92.9	137.0	706.4	9.2	21.5	15	0.9	0.0	0.00
## 87	1 2	sep thu	92.9	137.0	706.4	9.2	25.4	27	2.2	0.0	0.00
## 88	1 2	sep thu	92.9	137.0	706.4	9.2	22.4	34	2.2	0.0	0.00
## 89	1 2	sep sun	93.5	149.3	728.6	8.1	25.3	36	3.6	0.0	0.00
## 90	6 5	mar sat	91.7	35.8	80.8	7.8	17.4	25	4.9	0.0	0.00
## 91	6 5	aug sat	90.2	96.9	624.2	8.9	14.7	59	5.8	0.0	0.00
## 92	8 6	mar fri	91.7	35.8	80.8	7.8	17.4	24	5.4	0.0	0.00
## 93	8 6	aug sun	92.3	85.3	488.0	14.7	20.8	32	6.3	0.0	0.00
## 94	8 6	aug sun	91.4	142.4	601.4	10.6	18.2	43	4.9	0.0	0.00
## 95	8 6	aug mon	91.1	103.2	638.8	5.8	23.4	22	2.7	0.0	0.00
## 96	4 4	sep sun	89.7	90.0	704.4	4.8	17.8	64	1.3	0.0	0.00
## 97	3 4	feb sat	83.9	8.0	30.2	2.6	12.7	48	1.8	0.0	0.00
## 98	3 4	mar sat	69.0	2.4	15.5	0.7	17.4	24	5.4	0.0	0.00
## 99	3 4	aug sun	91.4	142.4	601.4	10.6	11.6	87	4.5	0.0	0.00
## 100	3 4	aug sun	91.4	142.4	601.4	10.6	19.8	39	5.4	0.0	0.00
## 101	3 4	aug sun	91.4	142.4	601.4	10.6	19.8	39	5.4	0.0	0.00
## 102	3 4	aug tue	88.8	147.3	614.5	9.0	14.4	66	5.4	0.0	0.00
## 103	2 4	aug tue	94.8	108.3	647.1	17.0	20.1	40	4.0	0.0	0.00
## 104	2 4	sep sat	92.5	121.1	674.4	8.6	24.1	29	4.5	0.0	0.00
## 105	2 4	jan sat	82.1	3.7	9.3	2.9	5.3	78	3.1	0.0	0.00
## 106	4 5	mar fri	85.9	19.5	57.3	2.8	12.7	52	6.3	0.0	0.00
## 107	4 5	mar thu	91.4	30.7	74.3	7.5	18.2	29	3.1	0.0	0.00
## 108	4 5	aug sun	90.2	99.6	631.2	6.3	21.4	33	3.1	0.0	0.00
## 109	4 5	sep sat	92.5	88.0	698.6	7.1	20.3	45	3.1	0.0	0.00
## 110	4 5	sep mon	88.6	91.8	709.9	7.1	17.4	56	5.4	0.0	0.00
## 111	4 4	mar fri	85.9	19.5	57.3	2.8	13.7	43	5.8	0.0	0.00
## 112	3 4	mar fri	91.7	33.3	77.5	9.0	18.8	18	4.5	0.0	0.00
## 113	3 4	sep sun	89.7	90.0	704.4	4.8	22.8	39	3.6	0.0	0.00
## 114	3 4	sep mon	91.8	78.5	724.3	9.2	18.9	35	2.7	0.0	0.00
## 115	3 4	mar tue	88.1	25.7	67.6	3.8	15.8	27	7.6	0.0	0.00
## 116	3 5	mar tue	88.1	25.7	67.6	3.8	15.5	27	6.3	0.0	0.00
## 117	3 4	mar sat	91.7	35.8	80.8	7.8	11.6	30	6.3	0.0	0.00
## 118	3 4	mar sat	91.7	35.8	80.8	7.8	15.2	27	4.9	0.0	0.00
## 119	3 4	mar mon	90.1	39.7	86.6	6.2	10.6	30	4.0	0.0	0.00
## 120	3 4	aug thu	93.0	75.3	466.6	7.7	19.6	36	3.1	0.0	0.00
## 121	3 4	aug mon	91.5	145.4	608.2	10.7	10.3	74	2.2	0.0	0.00
## 122	3 4	aug mon	91.5	145.4	608.2	10.7	17.1	43	5.4	0.0	0.00
## 123	3 4	sep sun	92.4	124.1	680.7	8.5	22.5	42	5.4	0.0	0.00
## 124	3 4	sep tue	84.4	73.4	671.9	3.2	17.9	45	3.1	0.0	0.00
## 125	3 4	sep fri	94.3	85.1	692.3	15.9	19.8	50	5.4	0.0	0.00
## 126	3 4	oct sun	92.6	46.5	691.8	8.8	20.6	24	5.4	0.0	0.00
## 127	3 5	mar mon	87.6	52.2	103.8	5.0	9.0	49	2.2	0.0	0.00
## 128	3 5	sep fri	93.5	149.3	728.6	8.1	17.2	43	3.1	0.0	0.00
## 129	3 5	oct wed	91.4	37.9	673.8	5.2	15.9	46	3.6	0.0	0.00
## 130	2 5	oct sun	92.6	46.5	691.8	8.8	15.4	35	0.9	0.0	0.00
## 131	4 6	feb sat	68.2	21.5	87.2	0.8	15.4	40	2.7	0.0	0.00
## 132	4 6	mar mon	87.2	23.9	64.7	4.1	14.0	39	3.1	0.0	0.00
## 133	4 6	mar sun	89.3	51.3	102.2	9.6	10.6	46	4.9	0.0	0.00
## 134	4 6	sep thu	93.7	80.9	685.2	17.9	17.6	42	3.1	0.0	0.00
## 135	3 5	mar tue	88.1	25.7	67.6	3.8	14.9	38	2.7	0.0	0.00
## 136	3 5	aug sat	93.5	139.4	594.2	20.3	17.6	52	5.8	0.0	0.00

##	137	3	6	sep	sun	92.4	124.1	680.7	8.5	17.2	58	1.3	0.0	0.00
##	138	3	6	sep	mon	90.9	126.5	686.5	7.0	15.6	66	3.1	0.0	0.00
##	139	9	9	jul	tue	85.8	48.3	313.4	3.9	18.0	42	2.7	0.0	0.36
##	140	1	4	sep	tue	91.0	129.5	692.6	7.0	21.7	38	2.2	0.0	0.43
##	141	2	5	sep	mon	90.9	126.5	686.5	7.0	21.9	39	1.8	0.0	0.47
##	142	1	2	aug	wed	95.5	99.9	513.3	13.2	23.3	31	4.5	0.0	0.55
##	143	8	6	aug	fri	90.1	108.0	529.8	12.5	21.2	51	8.9	0.0	0.61
##	144	1	2	jul	sat	90.0	51.3	296.3	8.7	16.6	53	5.4	0.0	0.71
##	145	2	5	aug	wed	95.5	99.9	513.3	13.2	23.8	32	5.4	0.0	0.77
##	146	6	5	aug	thu	95.2	131.7	578.8	10.4	27.4	22	4.0	0.0	0.90
##	147	5	4	mar	mon	90.1	39.7	86.6	6.2	13.2	40	5.4	0.0	0.95
##	148	8	3	sep	tue	84.4	73.4	671.9	3.2	24.2	28	3.6	0.0	0.96
##	149	2	2	aug	tue	94.8	108.3	647.1	17.0	17.4	43	6.7	0.0	1.07
##	150	8	6	sep	thu	93.7	80.9	685.2	17.9	23.7	25	4.5	0.0	1.12
##	151	6	5	jun	fri	92.5	56.4	433.3	7.1	23.2	39	5.4	0.0	1.19
##	152	9	9	jul	sun	90.1	68.6	355.2	7.2	24.8	29	2.2	0.0	1.36
##	153	3	4	jul	sat	90.1	51.2	424.1	6.2	24.6	43	1.8	0.0	1.43
##	154	5	4	sep	fri	94.3	85.1	692.3	15.9	20.1	47	4.9	0.0	1.46
##	155	1	5	sep	sat	93.4	145.4	721.4	8.1	29.6	27	2.7	0.0	1.46
##	156	7	4	aug	sun	94.8	108.3	647.1	17.0	16.4	47	1.3	0.0	1.56
##	157	2	4	sep	sat	93.4	145.4	721.4	8.1	28.6	27	2.2	0.0	1.61
##	158	2	2	aug	wed	92.1	111.2	654.1	9.6	18.4	45	3.6	0.0	1.63
##	159	2	4	aug	wed	92.1	111.2	654.1	9.6	20.5	35	4.0	0.0	1.64
##	160	7	4	sep	fri	92.4	117.9	668.0	12.2	19.0	34	5.8	0.0	1.69
##	161	7	4	mar	mon	90.1	39.7	86.6	6.2	16.1	29	3.1	0.0	1.75
##	162	6	4	aug	thu	95.2	131.7	578.8	10.4	20.3	41	4.0	0.0	1.90
##	163	6	3	mar	sat	90.6	50.1	100.4	7.8	15.2	31	8.5	0.0	1.94
##	164	8	6	sep	sat	92.5	121.1	674.4	8.6	17.8	56	1.8	0.0	1.95
##	165	8	5	sep	sun	89.7	90.0	704.4	4.8	17.8	67	2.2	0.0	2.01
##	166	6	5	mar	thu	84.9	18.2	55.0	3.0	5.3	70	4.5	0.0	2.14
##	167	6	5	aug	wed	92.1	111.2	654.1	9.6	16.6	47	0.9	0.0	2.29
##	168	6	5	aug	wed	96.0	127.1	570.5	16.5	23.4	33	4.5	0.0	2.51
##	169	6	5	mar	fri	91.2	48.3	97.8	12.5	14.6	26	9.4	0.0	2.53
##	170	8	6	aug	thu	95.2	131.7	578.8	10.4	20.7	45	2.2	0.0	2.55
##	171	5	4	sep	wed	92.9	133.3	699.6	9.2	21.9	35	1.8	0.0	2.57
##	172	8	6	aug	wed	85.6	90.4	609.6	6.6	17.4	50	4.0	0.0	2.69
##	173	7	4	aug	sun	91.4	142.4	601.4	10.6	20.1	39	5.4	0.0	2.74
##	174	4	4	sep	mon	90.9	126.5	686.5	7.0	17.7	39	2.2	0.0	3.07
##	175	1	4	aug	sat	90.2	96.9	624.2	8.9	14.2	53	1.8	0.0	3.50
##	176	1	4	aug	sat	90.2	96.9	624.2	8.9	20.3	39	4.9	0.0	4.53
##	177	6	5	apr	thu	81.5	9.1	55.2	2.7	5.8	54	5.8	0.0	4.61
##	178	2	5	aug	sun	90.2	99.6	631.2	6.3	19.2	44	2.7	0.0	4.69
##	179	2	5	sep	wed	90.1	82.9	735.7	6.2	18.3	45	2.2	0.0	4.88
##	180	8	6	aug	tue	88.8	147.3	614.5	9.0	14.4	66	5.4	0.0	5.23
##	181	1	3	sep	sun	92.4	124.1	680.7	8.5	23.9	32	6.7	0.0	5.33
##	182	8	6	oct	mon	84.9	32.8	664.2	3.0	19.1	32	4.0	0.0	5.44
##	183	5	4	feb	sun	86.8	15.6	48.3	3.9	12.4	53	2.2	0.0	6.38
##	184	7	4	oct	mon	91.7	48.5	696.1	11.1	16.8	45	4.5	0.0	6.83
##	185	8	6	aug	fri	93.9	135.7	586.7	15.1	20.8	34	4.9	0.0	6.96
##	186	2	5	sep	tue	91.0	129.5	692.6	7.0	17.6	46	3.1	0.0	7.04
##	187	8	6	mar	sun	89.3	51.3	102.2	9.6	11.5	39	5.8	0.0	7.19
##	188	1	5	sep	mon	90.9	126.5	686.5	7.0	21.0	42	2.2	0.0	7.30
##	189	6	4	mar	sat	90.8	41.9	89.4	7.9	13.3	42	0.9	0.0	7.40
##	190	7	4	mar	sun	90.7	44.0	92.4	5.5	11.5	60	4.0	0.0	8.24

##	191	6	5	mar	fri	91.2	48.3	97.8	12.5	11.7	33	4.0	0.0	8.31
##	192	2	5	aug	thu	95.2	131.7	578.8	10.4	24.2	28	2.7	0.0	8.68
##	193	2	2	aug	tue	94.8	108.3	647.1	17.0	24.6	22	4.5	0.0	8.71
##	194	4	5	sep	wed	92.9	133.3	699.6	9.2	24.3	25	4.0	0.0	9.41
##	195	2	2	aug	tue	94.8	108.3	647.1	17.0	24.6	22	4.5	0.0	10.01
##	196	2	5	aug	fri	93.9	135.7	586.7	15.1	23.5	36	5.4	0.0	10.02
##	197	6	5	apr	thu	81.5	9.1	55.2	2.7	5.8	54	5.8	0.0	10.93
##	198	4	5	sep	thu	92.9	137.0	706.4	9.2	21.5	15	0.9	0.0	11.06
##	199	3	4	sep	tue	91.0	129.5	692.6	7.0	13.9	59	6.3	0.0	11.24
##	200	2	4	sep	mon	63.5	70.8	665.3	0.8	22.6	38	3.6	0.0	11.32
##	201	1	5	sep	tue	91.0	129.5	692.6	7.0	21.6	33	2.2	0.0	11.53
##	202	6	5	mar	sun	90.1	37.6	83.7	7.2	12.4	54	3.6	0.0	12.10
##	203	7	4	feb	sun	83.9	8.7	32.1	2.1	8.8	68	2.2	0.0	13.05
##	204	8	6	oct	wed	91.4	37.9	673.8	5.2	20.2	37	2.7	0.0	13.70
##	205	5	6	mar	sat	90.6	50.1	100.4	7.8	15.1	64	4.0	0.0	13.99
##	206	4	5	sep	thu	92.9	137.0	706.4	9.2	22.1	34	1.8	0.0	14.57
##	207	2	2	aug	sat	93.5	139.4	594.2	20.3	22.9	31	7.2	0.0	15.45
##	208	7	5	sep	tue	91.0	129.5	692.6	7.0	20.7	37	2.2	0.0	17.20
##	209	6	5	sep	fri	92.4	117.9	668.0	12.2	19.6	33	6.3	0.0	19.23
##	210	8	3	sep	thu	93.7	80.9	685.2	17.9	23.2	26	4.9	0.0	23.41
##	211	4	4	oct	sat	90.6	43.7	686.9	6.7	18.4	25	3.1	0.0	24.23
##	212	7	4	aug	sat	93.5	139.4	594.2	20.3	5.1	96	5.8	0.0	26.00
##	213	7	4	sep	fri	94.3	85.1	692.3	15.9	20.1	47	4.9	0.0	26.13
##	214	7	3	mar	mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	27.35
##	215	4	4	mar	sat	91.7	35.8	80.8	7.8	17.0	27	4.9	0.0	28.66
##	216	4	4	mar	sat	91.7	35.8	80.8	7.8	17.0	27	4.9	0.0	28.66
##	217	4	4	sep	sun	92.4	124.1	680.7	8.5	16.9	60	1.3	0.0	29.48
##	218	1	3	sep	mon	88.6	91.8	709.9	7.1	12.4	73	6.3	0.0	30.32
##	219	4	5	sep	wed	92.9	133.3	699.6	9.2	19.4	19	1.3	0.0	31.72
##	220	6	5	mar	mon	90.1	39.7	86.6	6.2	15.2	27	3.1	0.0	31.86
##	221	8	6	aug	sun	90.2	99.6	631.2	6.3	16.2	59	3.1	0.0	32.07
##	222	3	4	sep	fri	93.3	141.2	713.9	13.9	18.6	49	3.6	0.0	35.88
##	223	4	3	mar	mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	36.85
##	224	2	2	jul	fri	88.3	150.3	309.9	6.8	13.4	79	3.6	0.0	37.02
##	225	7	4	sep	wed	90.1	82.9	735.7	6.2	15.4	57	4.5	0.0	37.71
##	226	4	4	sep	sun	93.5	149.3	728.6	8.1	22.9	39	4.9	0.0	48.55
##	227	7	5	oct	mon	91.7	48.5	696.1	11.1	16.1	44	4.0	0.0	49.37
##	228	8	6	aug	sat	92.2	81.8	480.8	11.9	20.1	34	4.5	0.0	58.30
##	229	4	6	sep	sun	93.5	149.3	728.6	8.1	28.3	26	3.1	0.0	64.10
##	230	8	6	aug	sat	92.2	81.8	480.8	11.9	16.4	43	4.0	0.0	71.30
##	231	4	4	sep	wed	92.9	133.3	699.6	9.2	26.4	21	4.5	0.0	88.49
##	232	1	5	sep	sun	93.5	149.3	728.6	8.1	27.8	27	3.1	0.0	95.18
##	233	6	4	sep	tue	91.0	129.5	692.6	7.0	18.7	43	2.7	0.0	103.39
##	234	9	4	sep	tue	84.4	73.4	671.9	3.2	24.3	36	3.1	0.0	105.66
##	235	4	5	sep	sat	92.5	121.1	674.4	8.6	17.7	25	3.1	0.0	154.88
##	236	8	6	aug	sun	91.4	142.4	601.4	10.6	19.6	41	5.8	0.0	196.48
##	237	2	2	sep	sat	92.5	121.1	674.4	8.6	18.2	46	1.8	0.0	200.94
##	238	1	2	sep	tue	91.0	129.5	692.6	7.0	18.8	40	2.2	0.0	212.88
##	239	6	5	sep	sat	92.5	121.1	674.4	8.6	25.1	27	4.0	0.0	1090.84
##	240	7	5	apr	sun	81.9	3.0	7.9	3.5	13.4	75	1.8	0.0	0.00
##	241	6	3	apr	wed	88.0	17.2	43.5	3.8	15.2	51	2.7	0.0	0.00
##	242	4	4	apr	fri	83.0	23.3	85.3	2.3	16.7	20	3.1	0.0	0.00
##	243	2	4	aug	sun	94.2	122.3	589.9	12.9	15.4	66	4.0	0.0	10.13
##	244	7	4	aug	sun	91.8	175.1	700.7	13.8	21.9	73	7.6	1.0	0.00

##	245	2	4	aug	sun	91.8	175.1	700.7	13.8	22.4	54	7.6	0.0	2.87
##	246	3	4	aug	sun	91.8	175.1	700.7	13.8	26.8	38	6.3	0.0	0.76
##	247	5	4	aug	sun	91.8	175.1	700.7	13.8	25.7	39	5.4	0.0	0.09
##	248	2	4	aug	wed	92.2	91.6	503.6	9.6	20.7	70	2.2	0.0	0.75
##	249	8	6	aug	wed	93.1	157.3	666.7	13.5	28.7	28	2.7	0.0	0.00
##	250	3	4	aug	wed	93.1	157.3	666.7	13.5	21.7	40	0.4	0.0	2.47
##	251	8	5	aug	wed	93.1	157.3	666.7	13.5	26.8	25	3.1	0.0	0.68
##	252	8	5	aug	wed	93.1	157.3	666.7	13.5	24.0	36	3.1	0.0	0.24
##	253	6	5	aug	wed	93.1	157.3	666.7	13.5	22.1	37	3.6	0.0	0.21
##	254	7	4	aug	thu	91.9	109.2	565.5	8.0	21.4	38	2.7	0.0	1.52
##	255	6	3	aug	thu	91.6	138.1	621.7	6.3	18.9	41	3.1	0.0	10.34
##	256	2	5	aug	thu	87.5	77.0	694.8	5.0	22.3	46	4.0	0.0	0.00
##	257	8	6	aug	sat	94.2	117.2	581.1	11.0	23.9	41	2.2	0.0	8.02
##	258	4	3	aug	sat	94.2	117.2	581.1	11.0	21.4	44	2.7	0.0	0.68
##	259	3	4	aug	sat	91.8	170.9	692.3	13.7	20.6	59	0.9	0.0	0.00
##	260	7	4	aug	sat	91.8	170.9	692.3	13.7	23.7	40	1.8	0.0	1.38
##	261	2	4	aug	mon	93.6	97.9	542.0	14.4	28.3	32	4.0	0.0	8.85
##	262	3	4	aug	fri	91.6	112.4	573.0	8.9	11.2	84	7.6	0.0	3.30
##	263	2	4	aug	fri	91.6	112.4	573.0	8.9	21.4	42	3.1	0.0	4.25
##	264	6	3	aug	fri	91.1	141.1	629.1	7.1	19.3	39	3.6	0.0	1.56
##	265	4	4	aug	fri	94.3	167.6	684.4	13.0	21.8	53	3.1	0.0	6.54
##	266	4	4	aug	tue	93.7	102.2	550.3	14.6	22.1	54	7.6	0.0	0.79
##	267	6	5	aug	tue	94.3	131.7	607.1	22.7	19.4	55	4.0	0.0	0.17
##	268	2	2	aug	tue	92.1	152.6	658.2	14.3	23.7	24	3.1	0.0	0.00
##	269	3	4	aug	tue	92.1	152.6	658.2	14.3	21.0	32	3.1	0.0	0.00
##	270	4	4	aug	tue	92.1	152.6	658.2	14.3	19.1	53	2.7	0.0	4.40
##	271	2	2	aug	tue	92.1	152.6	658.2	14.3	21.8	56	3.1	0.0	0.52
##	272	8	6	aug	tue	92.1	152.6	658.2	14.3	20.1	58	4.5	0.0	9.27
##	273	2	5	aug	tue	92.1	152.6	658.2	14.3	20.2	47	4.0	0.0	3.09
##	274	4	6	dec	sun	84.4	27.2	353.5	6.8	4.8	57	8.5	0.0	8.98
##	275	8	6	dec	wed	84.0	27.8	354.6	5.3	5.1	61	8.0	0.0	11.19
##	276	4	6	dec	thu	84.6	26.4	352.0	2.0	5.1	61	4.9	0.0	5.38
##	277	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	17.85
##	278	3	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	10.73
##	279	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	22.03
##	280	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	9.77
##	281	4	6	dec	fri	84.7	26.7	352.6	4.1	2.2	59	4.9	0.0	9.27
##	282	6	5	dec	tue	85.4	25.4	349.7	2.6	5.1	24	8.5	0.0	24.77
##	283	6	3	feb	sun	84.9	27.5	353.5	3.4	4.2	51	4.0	0.0	0.00
##	284	3	4	feb	wed	86.9	6.6	18.7	3.2	8.8	35	3.1	0.0	1.10
##	285	5	4	feb	fri	85.2	4.9	15.8	6.3	7.5	46	8.0	0.0	24.24
##	286	2	5	jul	sun	93.9	169.7	411.8	12.3	23.4	40	6.3	0.0	0.00
##	287	7	6	jul	wed	91.2	183.1	437.7	12.5	12.6	90	7.6	0.2	0.00
##	288	7	4	jul	sat	91.6	104.2	474.9	9.0	22.1	49	2.7	0.0	0.00
##	289	7	4	jul	sat	91.6	104.2	474.9	9.0	24.2	32	1.8	0.0	0.00
##	290	7	4	jul	sat	91.6	104.2	474.9	9.0	24.3	30	1.8	0.0	0.00
##	291	2	5	jul	sat	91.6	104.2	474.9	9.0	18.7	53	1.8	0.0	0.00
##	292	9	4	jul	sat	91.6	104.2	474.9	9.0	25.3	39	0.9	0.0	8.00
##	293	4	5	jul	fri	91.6	100.2	466.3	6.3	22.9	40	1.3	0.0	2.64
##	294	7	6	jul	tue	93.1	180.4	430.8	11.0	26.9	28	5.4	0.0	86.45
##	295	8	6	jul	tue	92.3	88.8	440.9	8.5	17.1	67	3.6	0.0	6.57
##	296	7	5	jun	sun	93.1	180.4	430.8	11.0	22.2	48	1.3	0.0	0.00
##	297	6	4	jun	sun	90.4	89.5	290.8	6.4	14.3	46	1.8	0.0	0.90
##	298	8	6	jun	sun	90.4	89.5	290.8	6.4	15.4	45	2.2	0.0	0.00

##	299	8	6	jun	wed	91.2	147.8	377.2	12.7	19.6	43	4.9	0.0	0.00
##	300	6	5	jun	sat	53.4	71.0	233.8	0.4	10.6	90	2.7	0.0	0.00
##	301	6	5	jun	mon	90.4	93.3	298.1	7.5	20.7	25	4.9	0.0	0.00
##	302	6	5	jun	mon	90.4	93.3	298.1	7.5	19.1	39	5.4	0.0	3.52
##	303	3	6	jun	fri	91.1	94.1	232.1	7.1	19.2	38	4.5	0.0	0.00
##	304	3	6	jun	fri	91.1	94.1	232.1	7.1	19.2	38	4.5	0.0	0.00
##	305	6	5	may	sat	85.1	28.0	113.8	3.5	11.3	94	4.9	0.0	0.00
##	306	1	4	sep	sun	89.6	84.1	714.3	5.7	19.0	52	2.2	0.0	0.00
##	307	7	4	sep	sun	89.6	84.1	714.3	5.7	17.1	53	5.4	0.0	0.41
##	308	3	4	sep	sun	89.6	84.1	714.3	5.7	23.8	35	3.6	0.0	5.18
##	309	2	4	sep	sun	92.4	105.8	758.1	9.9	16.0	45	1.8	0.0	0.00
##	310	2	4	sep	sun	92.4	105.8	758.1	9.9	24.9	27	2.2	0.0	0.00
##	311	7	4	sep	sun	92.4	105.8	758.1	9.9	25.3	27	2.7	0.0	0.00
##	312	6	3	sep	sun	92.4	105.8	758.1	9.9	24.8	28	1.8	0.0	14.29
##	313	2	4	sep	sun	50.4	46.2	706.6	0.4	12.2	78	6.3	0.0	0.00
##	314	6	5	sep	wed	92.6	115.4	777.1	8.8	24.3	27	4.9	0.0	0.00
##	315	4	4	sep	wed	92.6	115.4	777.1	8.8	19.7	41	1.8	0.0	1.58
##	316	3	4	sep	wed	91.2	134.7	817.5	7.2	18.5	30	2.7	0.0	0.00
##	317	4	5	sep	thu	92.4	96.2	739.4	8.6	18.6	24	5.8	0.0	0.00
##	318	4	4	sep	thu	92.4	96.2	739.4	8.6	19.2	24	4.9	0.0	3.78
##	319	6	5	sep	thu	92.8	119.0	783.5	7.5	21.6	27	2.2	0.0	0.00
##	320	5	4	sep	thu	92.8	119.0	783.5	7.5	21.6	28	6.3	0.0	4.41
##	321	6	3	sep	thu	92.8	119.0	783.5	7.5	18.9	34	7.2	0.0	34.36
##	322	1	4	sep	thu	92.8	119.0	783.5	7.5	16.8	28	4.0	0.0	7.21
##	323	6	5	sep	thu	92.8	119.0	783.5	7.5	16.8	28	4.0	0.0	1.01
##	324	3	5	sep	thu	90.7	136.9	822.8	6.8	12.9	39	2.7	0.0	2.18
##	325	6	5	sep	thu	88.1	53.3	726.9	5.4	13.7	56	1.8	0.0	4.42
##	326	1	4	sep	sat	92.2	102.3	751.5	8.4	24.2	27	3.1	0.0	0.00
##	327	5	4	sep	sat	92.2	102.3	751.5	8.4	24.1	27	3.1	0.0	0.00
##	328	6	5	sep	sat	92.2	102.3	751.5	8.4	21.2	32	2.2	0.0	0.00
##	329	6	5	sep	sat	92.2	102.3	751.5	8.4	19.7	35	1.8	0.0	0.00
##	330	4	3	sep	sat	92.2	102.3	751.5	8.4	23.5	27	4.0	0.0	3.33
##	331	3	3	sep	sat	92.2	102.3	751.5	8.4	24.2	27	3.1	0.0	6.58
##	332	7	4	sep	sat	91.2	124.4	795.3	8.5	21.5	28	4.5	0.0	15.64
##	333	4	4	sep	sat	91.2	124.4	795.3	8.5	17.1	41	2.2	0.0	11.22
##	334	1	4	sep	mon	92.1	87.7	721.1	9.5	18.1	54	3.1	0.0	2.13
##	335	2	3	sep	mon	91.6	108.4	764.0	6.2	18.0	51	5.4	0.0	0.00
##	336	4	3	sep	mon	91.6	108.4	764.0	6.2	9.8	86	1.8	0.0	0.00
##	337	7	4	sep	mon	91.6	108.4	764.0	6.2	19.3	44	2.2	0.0	0.00
##	338	6	3	sep	mon	91.6	108.4	764.0	6.2	23.0	34	2.2	0.0	56.04
##	339	8	6	sep	mon	91.6	108.4	764.0	6.2	22.7	35	2.2	0.0	7.48
##	340	2	4	sep	mon	91.6	108.4	764.0	6.2	20.4	41	1.8	0.0	1.47
##	341	2	5	sep	mon	91.6	108.4	764.0	6.2	19.3	44	2.2	0.0	3.93
##	342	8	6	sep	mon	91.9	111.7	770.3	6.5	15.7	51	2.2	0.0	0.00
##	343	6	3	sep	mon	91.5	130.1	807.1	7.5	20.6	37	1.8	0.0	0.00
##	344	8	6	sep	mon	91.5	130.1	807.1	7.5	15.9	51	4.5	0.0	2.18
##	345	6	3	sep	mon	91.5	130.1	807.1	7.5	12.2	66	4.9	0.0	6.10
##	346	2	2	sep	mon	91.5	130.1	807.1	7.5	16.8	43	3.1	0.0	5.83
##	347	1	4	sep	mon	91.5	130.1	807.1	7.5	21.3	35	2.2	0.0	28.19
##	348	5	4	sep	fri	92.1	99.0	745.3	9.6	10.1	75	3.6	0.0	0.00
##	349	3	4	sep	fri	92.1	99.0	745.3	9.6	17.4	57	4.5	0.0	0.00
##	350	5	4	sep	fri	92.1	99.0	745.3	9.6	12.8	64	3.6	0.0	1.64
##	351	5	4	sep	fri	92.1	99.0	745.3	9.6	10.1	75	3.6	0.0	3.71
##	352	4	4	sep	fri	92.1	99.0	745.3	9.6	15.4	53	6.3	0.0	7.31

##	353	7	4	sep	fri	92.1	99.0	745.3	9.6	20.6	43	3.6	0.0	2.03
##	354	7	4	sep	fri	92.1	99.0	745.3	9.6	19.8	47	2.7	0.0	1.72
##	355	7	4	sep	fri	92.1	99.0	745.3	9.6	18.7	50	2.2	0.0	5.97
##	356	4	4	sep	fri	92.1	99.0	745.3	9.6	20.8	35	4.9	0.0	13.06
##	357	4	4	sep	fri	92.1	99.0	745.3	9.6	20.8	35	4.9	0.0	1.26
##	358	6	3	sep	fri	92.5	122.0	789.7	10.2	15.9	55	3.6	0.0	0.00
##	359	6	3	sep	fri	92.5	122.0	789.7	10.2	19.7	39	2.7	0.0	0.00
##	360	1	4	sep	fri	92.5	122.0	789.7	10.2	21.1	39	2.2	0.0	8.12
##	361	6	5	sep	fri	92.5	122.0	789.7	10.2	18.4	42	2.2	0.0	1.09
##	362	4	3	sep	fri	92.5	122.0	789.7	10.2	17.3	45	4.0	0.0	3.94
##	363	7	4	sep	fri	88.2	55.2	732.3	11.6	15.2	64	3.1	0.0	0.52
##	364	4	3	sep	tue	91.9	111.7	770.3	6.5	15.9	53	2.2	0.0	2.93
##	365	6	5	sep	tue	91.9	111.7	770.3	6.5	21.1	35	2.7	0.0	5.65
##	366	6	5	sep	tue	91.9	111.7	770.3	6.5	19.6	45	3.1	0.0	20.03
##	367	4	5	sep	tue	91.1	132.3	812.1	12.5	15.9	38	5.4	0.0	1.75
##	368	4	5	sep	tue	91.1	132.3	812.1	12.5	16.4	27	3.6	0.0	0.00
##	369	6	5	sep	sat	91.2	94.3	744.4	8.4	16.8	47	4.9	0.0	12.64
##	370	4	5	sep	sun	91.0	276.3	825.1	7.1	13.8	77	7.6	0.0	0.00
##	371	7	4	sep	sun	91.0	276.3	825.1	7.1	13.8	77	7.6	0.0	11.06
##	372	3	4	jul	wed	91.9	133.6	520.5	8.0	14.2	58	4.0	0.0	0.00
##	373	4	5	aug	sun	92.0	203.2	664.5	8.1	10.4	75	0.9	0.0	0.00
##	374	5	4	aug	thu	94.8	222.4	698.6	13.9	20.3	42	2.7	0.0	0.00
##	375	6	5	sep	fri	90.3	290.0	855.3	7.4	10.3	78	4.0	0.0	18.30
##	376	6	5	sep	sat	91.2	94.3	744.4	8.4	15.4	57	4.9	0.0	39.35
##	377	8	6	aug	mon	92.1	207.0	672.6	8.2	21.1	54	2.2	0.0	0.00
##	378	2	2	aug	sat	93.7	231.1	715.1	8.4	21.9	42	2.2	0.0	174.63
##	379	6	5	mar	thu	90.9	18.9	30.6	8.0	8.7	51	5.8	0.0	0.00
##	380	4	5	jan	sun	18.7	1.1	171.4	0.0	5.2	100	0.9	0.0	0.00
##	381	5	4	jul	wed	93.7	101.3	458.8	11.9	19.3	39	7.2	0.0	7.73
##	382	8	6	aug	thu	90.7	194.1	643.0	6.8	16.2	63	2.7	0.0	16.33
##	383	8	6	aug	wed	95.2	217.7	690.0	18.0	28.2	29	1.8	0.0	5.86
##	384	9	6	aug	thu	91.6	248.4	753.8	6.3	20.5	58	2.7	0.0	42.87
##	385	8	4	aug	sat	91.6	273.8	819.1	7.7	21.3	44	4.5	0.0	12.18
##	386	2	4	aug	sun	91.6	181.3	613.0	7.6	20.9	50	2.2	0.0	16.00
##	387	3	4	sep	sun	90.5	96.7	750.5	11.4	20.6	55	5.4	0.0	24.59
##	388	5	5	mar	thu	90.9	18.9	30.6	8.0	11.6	48	5.4	0.0	0.00
##	389	6	4	aug	fri	94.8	227.0	706.7	12.0	23.3	34	3.1	0.0	28.74
##	390	7	4	aug	fri	94.8	227.0	706.7	12.0	23.3	34	3.1	0.0	0.00
##	391	7	4	feb	mon	84.7	9.5	58.3	4.1	7.5	71	6.3	0.0	9.96
##	392	8	6	sep	fri	91.1	91.3	738.1	7.2	20.7	46	2.7	0.0	30.18
##	393	1	3	sep	sun	91.0	276.3	825.1	7.1	21.9	43	4.0	0.0	70.76
##	394	2	4	mar	tue	93.4	15.0	25.6	11.4	15.2	19	7.6	0.0	0.00
##	395	6	5	feb	mon	84.1	4.6	46.7	2.2	5.3	68	1.8	0.0	0.00
##	396	4	5	feb	sun	85.0	9.0	56.9	3.5	10.1	62	1.8	0.0	51.78
##	397	4	3	sep	sun	90.5	96.7	750.5	11.4	20.4	55	4.9	0.0	3.64
##	398	5	6	aug	sun	91.6	181.3	613.0	7.6	24.3	33	3.6	0.0	3.63
##	399	1	2	aug	sat	93.7	231.1	715.1	8.4	25.9	32	3.1	0.0	0.00
##	400	9	5	jun	wed	93.3	49.5	297.7	14.0	28.0	34	4.5	0.0	0.00
##	401	9	5	jun	wed	93.3	49.5	297.7	14.0	28.0	34	4.5	0.0	8.16
##	402	3	4	sep	thu	91.1	88.2	731.7	8.3	22.8	46	4.0	0.0	4.95
##	403	9	9	aug	fri	94.8	227.0	706.7	12.0	25.0	36	4.0	0.0	0.00
##	404	8	6	aug	thu	90.7	194.1	643.0	6.8	21.3	41	3.6	0.0	0.00
##	405	2	4	sep	wed	87.9	84.8	725.1	3.7	21.8	34	2.2	0.0	6.04
##	406	2	2	aug	tue	94.6	212.1	680.9	9.5	27.9	27	2.2	0.0	0.00



##	407	6	5	sep	sat	87.1	291.3	860.6	4.0	17.0	67	4.9	0.0	3.95
##	408	4	5	feb	sat	84.7	8.2	55.0	2.9	14.2	46	4.0	0.0	0.00
##	409	4	3	sep	fri	90.3	290.0	855.3	7.4	19.9	44	3.1	0.0	7.80
##	410	1	4	jul	tue	92.3	96.2	450.2	12.1	23.4	31	5.4	0.0	0.00
##	411	6	3	feb	fri	84.1	7.3	52.8	2.7	14.7	42	2.7	0.0	0.00
##	412	7	4	feb	fri	84.6	3.2	43.6	3.3	8.2	53	9.4	0.0	4.62
##	413	9	4	jul	mon	92.3	92.1	442.1	9.8	22.8	27	4.5	0.0	1.63
##	414	7	5	aug	sat	93.7	231.1	715.1	8.4	26.4	33	3.6	0.0	0.00
##	415	5	4	aug	sun	93.6	235.1	723.1	10.1	24.1	50	4.0	0.0	0.00
##	416	8	6	aug	thu	94.8	222.4	698.6	13.9	27.5	27	4.9	0.0	746.28
##	417	6	3	jul	tue	92.7	164.1	575.8	8.9	26.3	39	3.1	0.0	7.02
##	418	6	5	mar	wed	93.4	17.3	28.3	9.9	13.8	24	5.8	0.0	0.00
##	419	2	4	aug	sun	92.0	203.2	664.5	8.1	24.9	42	5.4	0.0	2.44
##	420	2	5	aug	sun	91.6	181.3	613.0	7.6	24.8	36	4.0	0.0	3.05
##	421	8	8	aug	wed	91.7	191.4	635.9	7.8	26.2	36	4.5	0.0	185.76
##	422	2	4	aug	wed	95.2	217.7	690.0	18.0	30.8	19	4.5	0.0	0.00
##	423	8	6	jul	sun	88.9	263.1	795.9	5.2	29.3	27	3.6	0.0	6.30
##	424	1	3	sep	sat	91.2	94.3	744.4	8.4	22.3	48	4.0	0.0	0.72
##	425	8	6	aug	sat	93.7	231.1	715.1	8.4	26.9	31	3.6	0.0	4.96
##	426	2	2	aug	thu	91.6	248.4	753.8	6.3	20.4	56	2.2	0.0	0.00
##	427	8	6	aug	thu	91.6	248.4	753.8	6.3	20.4	56	2.2	0.0	0.00
##	428	2	4	aug	mon	92.1	207.0	672.6	8.2	27.9	33	2.2	0.0	2.35
##	429	1	3	aug	thu	94.8	222.4	698.6	13.9	26.2	34	5.8	0.0	0.00
##	430	3	4	aug	sun	91.6	181.3	613.0	7.6	24.6	44	4.0	0.0	3.20
##	431	7	4	sep	thu	89.7	287.2	849.3	6.8	19.4	45	3.6	0.0	0.00
##	432	1	3	aug	sat	92.1	178.0	605.3	9.6	23.3	40	4.0	0.0	6.36
##	433	8	6	aug	thu	94.8	222.4	698.6	13.9	23.9	38	6.7	0.0	0.00
##	434	2	4	aug	sun	93.6	235.1	723.1	10.1	20.9	66	4.9	0.0	15.34
##	435	1	4	aug	fri	90.6	269.8	811.2	5.5	22.2	45	3.6	0.0	0.00
##	436	2	5	jul	sat	90.8	84.7	376.6	5.6	23.8	51	1.8	0.0	0.00
##	437	8	6	aug	mon	92.1	207.0	672.6	8.2	26.8	35	1.3	0.0	0.54
##	438	8	6	aug	sat	89.4	253.6	768.4	9.7	14.2	73	2.7	0.0	0.00
##	439	2	5	aug	sat	93.7	231.1	715.1	8.4	23.6	53	4.0	0.0	6.43
##	440	1	3	sep	fri	91.1	91.3	738.1	7.2	19.1	46	2.2	0.0	0.33
##	441	5	4	sep	fri	90.3	290.0	855.3	7.4	16.2	58	3.6	0.0	0.00
##	442	8	6	aug	mon	92.1	207.0	672.6	8.2	25.5	29	1.8	0.0	1.23
##	443	6	5	apr	mon	87.9	24.9	41.6	3.7	10.9	64	3.1	0.0	3.35
##	444	1	2	jul	fri	90.7	80.9	368.3	16.8	14.8	78	8.0	0.0	0.00
##	445	2	5	sep	fri	90.3	290.0	855.3	7.4	16.2	58	3.6	0.0	9.96
##	446	5	5	aug	sun	94.0	47.9	100.7	10.7	17.3	80	4.5	0.0	0.00
##	447	6	5	aug	sun	92.0	203.2	664.5	8.1	19.1	70	2.2	0.0	0.00
##	448	3	4	mar	wed	93.4	17.3	28.3	9.9	8.9	35	8.0	0.0	0.00
##	449	7	4	sep	wed	89.7	284.9	844.0	10.1	10.5	77	4.0	0.0	0.00
##	450	7	4	aug	sun	91.6	181.3	613.0	7.6	19.3	61	4.9	0.0	0.00
##	451	4	5	aug	wed	95.2	217.7	690.0	18.0	23.4	49	5.4	0.0	6.43
##	452	1	4	aug	fri	90.5	196.8	649.9	16.3	11.8	88	4.9	0.0	9.71
##	453	7	4	aug	mon	91.5	238.2	730.6	7.5	17.7	65	4.0	0.0	0.00
##	454	4	5	aug	thu	89.4	266.2	803.3	5.6	17.4	54	3.1	0.0	0.00
##	455	3	4	aug	thu	91.6	248.4	753.8	6.3	16.8	56	3.1	0.0	0.00
##	456	3	4	jul	mon	94.6	160.0	567.2	16.7	17.9	48	2.7	0.0	0.00
##	457	2	4	aug	thu	91.6	248.4	753.8	6.3	16.6	59	2.7	0.0	0.00
##	458	1	4	aug	wed	91.7	191.4	635.9	7.8	19.9	50	4.0	0.0	82.75
##	459	8	6	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	3.32
##	460	7	4	aug	sat	91.6	273.8	819.1	7.7	15.5	72	8.0	0.0	1.94

##	461	2	5	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	0.00
##	462	8	6	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	0.00
##	463	1	4	sep	sun	91.0	276.3	825.1	7.1	14.5	76	7.6	0.0	3.71
##	464	6	5	feb	tue	75.1	4.4	16.2	1.9	4.6	82	6.3	0.0	5.39
##	465	6	4	feb	tue	75.1	4.4	16.2	1.9	5.1	77	5.4	0.0	2.14
##	466	2	2	feb	sat	79.5	3.6	15.3	1.8	4.6	59	0.9	0.0	6.84
##	467	6	5	mar	mon	87.2	15.1	36.9	7.1	10.2	45	5.8	0.0	3.18
##	468	3	4	mar	wed	90.2	18.5	41.1	7.3	11.2	41	5.4	0.0	5.55
##	469	6	5	mar	thu	91.3	20.6	43.5	8.5	13.3	27	3.6	0.0	6.61
##	470	6	3	apr	sun	91.0	14.6	25.6	12.3	13.7	33	9.4	0.0	61.13
##	471	5	4	apr	sun	91.0	14.6	25.6	12.3	17.6	27	5.8	0.0	0.00
##	472	4	3	may	fri	89.6	25.4	73.7	5.7	18.0	40	4.0	0.0	38.48
##	473	8	3	jun	mon	88.2	96.2	229.0	4.7	14.3	79	4.0	0.0	1.94
##	474	9	4	jun	sat	90.5	61.1	252.6	9.4	24.5	50	3.1	0.0	70.32
##	475	4	3	jun	thu	93.0	103.8	316.7	10.8	26.4	35	2.7	0.0	10.08
##	476	2	5	jun	thu	93.7	121.7	350.2	18.0	22.7	40	9.4	0.0	3.19
##	477	4	3	jul	thu	93.5	85.3	395.0	9.9	27.2	28	1.3	0.0	1.76
##	478	4	3	jul	sun	93.7	101.3	423.4	14.7	26.1	45	4.0	0.0	7.36
##	479	7	4	jul	sun	93.7	101.3	423.4	14.7	18.2	82	4.5	0.0	2.21
##	480	7	4	jul	mon	89.2	103.9	431.6	6.4	22.6	57	4.9	0.0	278.53
##	481	9	9	jul	thu	93.2	114.4	560.0	9.5	30.2	25	4.5	0.0	2.75
##	482	4	3	jul	thu	93.2	114.4	560.0	9.5	30.2	22	4.9	0.0	0.00
##	483	3	4	aug	sun	94.9	130.3	587.1	14.1	23.4	40	5.8	0.0	1.29
##	484	8	6	aug	sun	94.9	130.3	587.1	14.1	31.0	27	5.4	0.0	0.00
##	485	2	5	aug	sun	94.9	130.3	587.1	14.1	33.1	25	4.0	0.0	26.43
##	486	2	4	aug	mon	95.0	135.5	596.3	21.3	30.6	28	3.6	0.0	2.07
##	487	5	4	aug	tue	95.1	141.3	605.8	17.7	24.1	43	6.3	0.0	2.00
##	488	5	4	aug	tue	95.1	141.3	605.8	17.7	26.4	34	3.6	0.0	16.40
##	489	4	4	aug	tue	95.1	141.3	605.8	17.7	19.4	71	7.6	0.0	46.70
##	490	4	4	aug	wed	95.1	141.3	605.8	17.7	20.6	58	1.3	0.0	0.00
##	491	4	4	aug	wed	95.1	141.3	605.8	17.7	28.7	33	4.0	0.0	0.00
##	492	4	4	aug	thu	95.8	152.0	624.1	13.8	32.4	21	4.5	0.0	0.00
##	493	1	3	aug	fri	95.9	158.0	633.6	11.3	32.4	27	2.2	0.0	0.00
##	494	1	3	aug	fri	95.9	158.0	633.6	11.3	27.5	29	4.5	0.0	43.32
##	495	6	6	aug	sat	96.0	164.0	643.0	14.0	30.8	30	4.9	0.0	8.59
##	496	6	6	aug	mon	96.2	175.5	661.8	16.8	23.9	42	2.2	0.0	0.00
##	497	4	5	aug	mon	96.2	175.5	661.8	16.8	32.6	26	3.1	0.0	2.77
##	498	3	4	aug	tue	96.1	181.1	671.2	14.3	32.3	27	2.2	0.0	14.68
##	499	6	5	aug	tue	96.1	181.1	671.2	14.3	33.3	26	2.7	0.0	40.54
##	500	7	5	aug	tue	96.1	181.1	671.2	14.3	27.3	63	4.9	6.4	10.82
##	501	8	6	aug	tue	96.1	181.1	671.2	14.3	21.6	65	4.9	0.8	0.00
##	502	7	5	aug	tue	96.1	181.1	671.2	14.3	21.6	65	4.9	0.8	0.00
##	503	4	4	aug	tue	96.1	181.1	671.2	14.3	20.7	69	4.9	0.4	0.00
##	504	2	4	aug	wed	94.5	139.4	689.1	20.0	29.2	30	4.9	0.0	1.95
##	505	4	3	aug	wed	94.5	139.4	689.1	20.0	28.9	29	4.9	0.0	49.59
##	506	1	2	aug	thu	91.0	163.2	744.4	10.1	26.7	35	1.8	0.0	5.80
##	507	1	2	aug	fri	91.0	166.9	752.6	7.1	18.5	73	8.5	0.0	0.00
##	508	2	4	aug	fri	91.0	166.9	752.6	7.1	25.9	41	3.6	0.0	0.00
##	509	1	2	aug	fri	91.0	166.9	752.6	7.1	25.9	41	3.6	0.0	0.00
##	510	5	4	aug	fri	91.0	166.9	752.6	7.1	21.1	71	7.6	1.4	2.17
##	511	6	5	aug	fri	91.0	166.9	752.6	7.1	18.2	62	5.4	0.0	0.43
##	512	8	6	aug	sun	81.6	56.7	665.6	1.9	27.8	35	2.7	0.0	0.00
##	513	4	3	aug	sun	81.6	56.7	665.6	1.9	27.8	32	2.7	0.0	6.44
##	514	2	4	aug	sun	81.6	56.7	665.6	1.9	21.9	71	5.8	0.0	54.29

```
## 515 7 4   aug sun 81.6  56.7 665.6  1.9 21.2  70  6.7  0.0  11.16
## 516 1 4   aug sat 94.4 146.0 614.7 11.3 25.6  42  4.0  0.0   0.00
## 517 6 3   nov tue 79.5   3.0 106.7  1.1 11.8  31  4.5  0.0   0.00
```

a. How many observations are there in the dataset?

```
q1.a <- nrow(forestfires)
q1.a
```

```
## [1] 517
```

b. How many observations are there with a fire (i.e., area>0)

```
q1.b <- filter(forestfires, area>0)
nrow(q1.b)
```

```
## [1] 270
```

c. How many observations are there with a rain (i.e., rain>0)

```
q1.c <- filter(forestfires, rain>0)
nrow(q1.c)
```

```
## [1] 8
```

d. How many observations are there with both a fire and a rain?

```
q1.d <- filter(forestfires, area>0, rain>0)
nrow(q1.d)
```

```
## [1] 2
```

2. Show the columns month, day, area of the all the observations.

```
q2 <- select(forestfires, month, day, area)
q2
```

```
##      month day    area
## 1     mar fri    0.00
## 2     oct tue    0.00
## 3     oct sat    0.00
## 4     mar fri    0.00
## 5     mar sun    0.00
## 6     aug sun    0.00
## 7     aug mon    0.00
## 8     aug mon    0.00
## 9     sep tue    0.00
## 10    sep sat    0.00
```

## 11	sep sat	0.00
## 12	sep sat	0.00
## 13	aug fri	0.00
## 14	sep mon	0.00
## 15	sep wed	0.00
## 16	sep fri	0.00
## 17	mar sat	0.00
## 18	oct mon	0.00
## 19	mar wed	0.00
## 20	apr sat	0.00
## 21	sep tue	0.00
## 22	sep mon	0.00
## 23	jun sun	0.00
## 24	aug sat	0.00
## 25	aug sat	0.00
## 26	aug sun	0.00
## 27	sep fri	0.00
## 28	sep mon	0.00
## 29	sep sat	0.00
## 30	sep sun	0.00
## 31	sep fri	0.00
## 32	sep mon	0.00
## 33	sep fri	0.00
## 34	sep sun	0.00
## 35	sep mon	0.00
## 36	sep tue	0.00
## 37	oct tue	0.00
## 38	oct fri	0.00
## 39	oct sat	0.00
## 40	mar tue	0.00
## 41	jul tue	0.00
## 42	aug sat	0.00
## 43	aug tue	0.00
## 44	sep sat	0.00
## 45	sep wed	0.00
## 46	sep wed	0.00
## 47	sep mon	0.00
## 48	jul mon	0.00
## 49	mar mon	0.00
## 50	mar mon	0.00
## 51	sep thu	0.00
## 52	aug sun	0.00
## 53	aug wed	0.00
## 54	aug wed	0.00
## 55	aug thu	0.00
## 56	sep thu	0.00
## 57	sep tue	0.00
## 58	oct sun	0.00
## 59	feb mon	0.00
## 60	feb fri	0.00
## 61	mar sun	0.00
## 62	mar sun	0.00
## 63	aug thu	0.00
## 64	aug sun	0.00

## 65	aug mon	0.00
## 66	aug thu	0.00
## 67	sep fri	0.00
## 68	sep fri	0.00
## 69	sep fri	0.00
## 70	mar fri	0.00
## 71	mar fri	0.00
## 72	sep fri	0.00
## 73	mar fri	0.00
## 74	aug tue	0.00
## 75	sep fri	0.00
## 76	feb thu	0.00
## 77	feb fri	0.00
## 78	mar mon	0.00
## 79	aug fri	0.00
## 80	aug tue	0.00
## 81	aug sun	0.00
## 82	aug sun	0.00
## 83	aug tue	0.00
## 84	aug wed	0.00
## 85	aug thu	0.00
## 86	sep thu	0.00
## 87	sep thu	0.00
## 88	sep thu	0.00
## 89	sep sun	0.00
## 90	mar sat	0.00
## 91	aug sat	0.00
## 92	mar fri	0.00
## 93	aug sun	0.00
## 94	aug sun	0.00
## 95	aug mon	0.00
## 96	sep sun	0.00
## 97	feb sat	0.00
## 98	mar sat	0.00
## 99	aug sun	0.00
## 100	aug sun	0.00
## 101	aug sun	0.00
## 102	aug tue	0.00
## 103	aug tue	0.00
## 104	sep sat	0.00
## 105	jan sat	0.00
## 106	mar fri	0.00
## 107	mar thu	0.00
## 108	aug sun	0.00
## 109	sep sat	0.00
## 110	sep mon	0.00
## 111	mar fri	0.00
## 112	mar fri	0.00
## 113	sep sun	0.00
## 114	sep mon	0.00
## 115	mar tue	0.00
## 116	mar tue	0.00
## 117	mar sat	0.00
## 118	mar sat	0.00

## 119	mar mon	0.00
## 120	aug thu	0.00
## 121	aug mon	0.00
## 122	aug mon	0.00
## 123	sep sun	0.00
## 124	sep tue	0.00
## 125	sep fri	0.00
## 126	oct sun	0.00
## 127	mar mon	0.00
## 128	sep fri	0.00
## 129	oct wed	0.00
## 130	oct sun	0.00
## 131	feb sat	0.00
## 132	mar mon	0.00
## 133	mar sun	0.00
## 134	sep thu	0.00
## 135	mar tue	0.00
## 136	aug sat	0.00
## 137	sep sun	0.00
## 138	sep mon	0.00
## 139	jul tue	0.36
## 140	sep tue	0.43
## 141	sep mon	0.47
## 142	aug wed	0.55
## 143	aug fri	0.61
## 144	jul sat	0.71
## 145	aug wed	0.77
## 146	aug thu	0.90
## 147	mar mon	0.95
## 148	sep tue	0.96
## 149	aug tue	1.07
## 150	sep thu	1.12
## 151	jun fri	1.19
## 152	jul sun	1.36
## 153	jul sat	1.43
## 154	sep fri	1.46
## 155	sep sat	1.46
## 156	aug sun	1.56
## 157	sep sat	1.61
## 158	aug wed	1.63
## 159	aug wed	1.64
## 160	sep fri	1.69
## 161	mar mon	1.75
## 162	aug thu	1.90
## 163	mar sat	1.94
## 164	sep sat	1.95
## 165	sep sun	2.01
## 166	mar thu	2.14
## 167	aug wed	2.29
## 168	aug wed	2.51
## 169	mar fri	2.53
## 170	aug thu	2.55
## 171	sep wed	2.57
## 172	aug wed	2.69

## 173	aug sun	2.74
## 174	sep mon	3.07
## 175	aug sat	3.50
## 176	aug sat	4.53
## 177	apr thu	4.61
## 178	aug sun	4.69
## 179	sep wed	4.88
## 180	aug tue	5.23
## 181	sep sun	5.33
## 182	oct mon	5.44
## 183	feb sun	6.38
## 184	oct mon	6.83
## 185	aug fri	6.96
## 186	sep tue	7.04
## 187	mar sun	7.19
## 188	sep mon	7.30
## 189	mar sat	7.40
## 190	mar sun	8.24
## 191	mar fri	8.31
## 192	aug thu	8.68
## 193	aug tue	8.71
## 194	sep wed	9.41
## 195	aug tue	10.01
## 196	aug fri	10.02
## 197	apr thu	10.93
## 198	sep thu	11.06
## 199	sep tue	11.24
## 200	sep mon	11.32
## 201	sep tue	11.53
## 202	mar sun	12.10
## 203	feb sun	13.05
## 204	oct wed	13.70
## 205	mar sat	13.99
## 206	sep thu	14.57
## 207	aug sat	15.45
## 208	sep tue	17.20
## 209	sep fri	19.23
## 210	sep thu	23.41
## 211	oct sat	24.23
## 212	aug sat	26.00
## 213	sep fri	26.13
## 214	mar mon	27.35
## 215	mar sat	28.66
## 216	mar sat	28.66
## 217	sep sun	29.48
## 218	sep mon	30.32
## 219	sep wed	31.72
## 220	mar mon	31.86
## 221	aug sun	32.07
## 222	sep fri	35.88
## 223	mar mon	36.85
## 224	jul fri	37.02
## 225	sep wed	37.71
## 226	sep sun	48.55

##	227	oct mon	49.37
##	228	aug sat	58.30
##	229	sep sun	64.10
##	230	aug sat	71.30
##	231	sep wed	88.49
##	232	sep sun	95.18
##	233	sep tue	103.39
##	234	sep tue	105.66
##	235	sep sat	154.88
##	236	aug sun	196.48
##	237	sep sat	200.94
##	238	sep tue	212.88
##	239	sep sat	1090.84
##	240	apr sun	0.00
##	241	apr wed	0.00
##	242	apr fri	0.00
##	243	aug sun	10.13
##	244	aug sun	0.00
##	245	aug sun	2.87
##	246	aug sun	0.76
##	247	aug sun	0.09
##	248	aug wed	0.75
##	249	aug wed	0.00
##	250	aug wed	2.47
##	251	aug wed	0.68
##	252	aug wed	0.24
##	253	aug wed	0.21
##	254	aug thu	1.52
##	255	aug thu	10.34
##	256	aug thu	0.00
##	257	aug sat	8.02
##	258	aug sat	0.68
##	259	aug sat	0.00
##	260	aug sat	1.38
##	261	aug mon	8.85
##	262	aug fri	3.30
##	263	aug fri	4.25
##	264	aug fri	1.56
##	265	aug fri	6.54
##	266	aug tue	0.79
##	267	aug tue	0.17
##	268	aug tue	0.00
##	269	aug tue	0.00
##	270	aug tue	4.40
##	271	aug tue	0.52
##	272	aug tue	9.27
##	273	aug tue	3.09
##	274	dec sun	8.98
##	275	dec wed	11.19
##	276	dec thu	5.38
##	277	dec mon	17.85
##	278	dec mon	10.73
##	279	dec mon	22.03
##	280	dec mon	9.77



## 281	dec fri	9.27
## 282	dec tue	24.77
## 283	feb sun	0.00
## 284	feb wed	1.10
## 285	feb fri	24.24
## 286	jul sun	0.00
## 287	jul wed	0.00
## 288	jul sat	0.00
## 289	jul sat	0.00
## 290	jul sat	0.00
## 291	jul sat	0.00
## 292	jul sat	8.00
## 293	jul fri	2.64
## 294	jul tue	86.45
## 295	jul tue	6.57
## 296	jun sun	0.00
## 297	jun sun	0.90
## 298	jun sun	0.00
## 299	jun wed	0.00
## 300	jun sat	0.00
## 301	jun mon	0.00
## 302	jun mon	3.52
## 303	jun fri	0.00
## 304	jun fri	0.00
## 305	may sat	0.00
## 306	sep sun	0.00
## 307	sep sun	0.41
## 308	sep sun	5.18
## 309	sep sun	0.00
## 310	sep sun	0.00
## 311	sep sun	0.00
## 312	sep sun	14.29
## 313	sep sun	0.00
## 314	sep wed	0.00
## 315	sep wed	1.58
## 316	sep wed	0.00
## 317	sep thu	0.00
## 318	sep thu	3.78
## 319	sep thu	0.00
## 320	sep thu	4.41
## 321	sep thu	34.36
## 322	sep thu	7.21
## 323	sep thu	1.01
## 324	sep thu	2.18
## 325	sep thu	4.42
## 326	sep sat	0.00
## 327	sep sat	0.00
## 328	sep sat	0.00
## 329	sep sat	0.00
## 330	sep sat	3.33
## 331	sep sat	6.58
## 332	sep sat	15.64
## 333	sep sat	11.22
## 334	sep mon	2.13

## 335	sep mon	0.00
## 336	sep mon	0.00
## 337	sep mon	0.00
## 338	sep mon	56.04
## 339	sep mon	7.48
## 340	sep mon	1.47
## 341	sep mon	3.93
## 342	sep mon	0.00
## 343	sep mon	0.00
## 344	sep mon	2.18
## 345	sep mon	6.10
## 346	sep mon	5.83
## 347	sep mon	28.19
## 348	sep fri	0.00
## 349	sep fri	0.00
## 350	sep fri	1.64
## 351	sep fri	3.71
## 352	sep fri	7.31
## 353	sep fri	2.03
## 354	sep fri	1.72
## 355	sep fri	5.97
## 356	sep fri	13.06
## 357	sep fri	1.26
## 358	sep fri	0.00
## 359	sep fri	0.00
## 360	sep fri	8.12
## 361	sep fri	1.09
## 362	sep fri	3.94
## 363	sep fri	0.52
## 364	sep tue	2.93
## 365	sep tue	5.65
## 366	sep tue	20.03
## 367	sep tue	1.75
## 368	sep tue	0.00
## 369	sep sat	12.64
## 370	sep sun	0.00
## 371	sep sun	11.06
## 372	jul wed	0.00
## 373	aug sun	0.00
## 374	aug thu	0.00
## 375	sep fri	18.30
## 376	sep sat	39.35
## 377	aug mon	0.00
## 378	aug sat	174.63
## 379	mar thu	0.00
## 380	jan sun	0.00
## 381	jul wed	7.73
## 382	aug thu	16.33
## 383	aug wed	5.86
## 384	aug thu	42.87
## 385	aug sat	12.18
## 386	aug sun	16.00
## 387	sep sun	24.59
## 388	mar thu	0.00

## 389	aug fri	28.74
## 390	aug fri	0.00
## 391	feb mon	9.96
## 392	sep fri	30.18
## 393	sep sun	70.76
## 394	mar tue	0.00
## 395	feb mon	0.00
## 396	feb sun	51.78
## 397	sep sun	3.64
## 398	aug sun	3.63
## 399	aug sat	0.00
## 400	jun wed	0.00
## 401	jun wed	8.16
## 402	sep thu	4.95
## 403	aug fri	0.00
## 404	aug thu	0.00
## 405	sep wed	6.04
## 406	aug tue	0.00
## 407	sep sat	3.95
## 408	feb sat	0.00
## 409	sep fri	7.80
## 410	jul tue	0.00
## 411	feb fri	0.00
## 412	feb fri	4.62
## 413	jul mon	1.63
## 414	aug sat	0.00
## 415	aug sun	0.00
## 416	aug thu	746.28
## 417	jul tue	7.02
## 418	mar wed	0.00
## 419	aug sun	2.44
## 420	aug sun	3.05
## 421	aug wed	185.76
## 422	aug wed	0.00
## 423	jul sun	6.30
## 424	sep sat	0.72
## 425	aug sat	4.96
## 426	aug thu	0.00
## 427	aug thu	0.00
## 428	aug mon	2.35
## 429	aug thu	0.00
## 430	aug sun	3.20
## 431	sep thu	0.00
## 432	aug sat	6.36
## 433	aug thu	0.00
## 434	aug sun	15.34
## 435	aug fri	0.00
## 436	jul sat	0.00
## 437	aug mon	0.54
## 438	aug sat	0.00
## 439	aug sat	6.43
## 440	sep fri	0.33
## 441	sep fri	0.00
## 442	aug mon	1.23

## 443	apr mon	3.35
## 444	jul fri	0.00
## 445	sep fri	9.96
## 446	aug sun	0.00
## 447	aug sun	0.00
## 448	mar wed	0.00
## 449	sep wed	0.00
## 450	aug sun	0.00
## 451	aug wed	6.43
## 452	aug fri	9.71
## 453	aug mon	0.00
## 454	aug thu	0.00
## 455	aug thu	0.00
## 456	jul mon	0.00
## 457	aug thu	0.00
## 458	aug wed	82.75
## 459	aug sat	3.32
## 460	aug sat	1.94
## 461	aug sat	0.00
## 462	aug sat	0.00
## 463	sep sun	3.71
## 464	feb tue	5.39
## 465	feb tue	2.14
## 466	feb sat	6.84
## 467	mar mon	3.18
## 468	mar wed	5.55
## 469	mar thu	6.61
## 470	apr sun	61.13
## 471	apr sun	0.00
## 472	may fri	38.48
## 473	jun mon	1.94
## 474	jun sat	70.32
## 475	jun thu	10.08
## 476	jun thu	3.19
## 477	jul thu	1.76
## 478	jul sun	7.36
## 479	jul sun	2.21
## 480	jul mon	278.53
## 481	jul thu	2.75
## 482	jul thu	0.00
## 483	aug sun	1.29
## 484	aug sun	0.00
## 485	aug sun	26.43
## 486	aug mon	2.07
## 487	aug tue	2.00
## 488	aug tue	16.40
## 489	aug tue	46.70
## 490	aug wed	0.00
## 491	aug wed	0.00
## 492	aug thu	0.00
## 493	aug fri	0.00
## 494	aug fri	43.32
## 495	aug sat	8.59
## 496	aug mon	0.00

```
## 497   aug mon    2.77
## 498   aug tue   14.68
## 499   aug tue   40.54
## 500   aug tue   10.82
## 501   aug tue    0.00
## 502   aug tue    0.00
## 503   aug tue    0.00
## 504   aug wed    1.95
## 505   aug wed   49.59
## 506   aug thu    5.80
## 507   aug fri    0.00
## 508   aug fri    0.00
## 509   aug fri    0.00
## 510   aug fri    2.17
## 511   aug fri    0.43
## 512   aug sun    0.00
## 513   aug sun    6.44
## 514   aug sun   54.29
## 515   aug sun   11.16
## 516   aug sat    0.00
## 517   nov tue    0.00
```

### 3. Show the columns month, day, area of the observations with a fire.

```
q3.1 <- filter(forestfires, area>0)
q3.2 <- select(q3.1, month, day, area)
q3.2
```

```
##      month day   area
## 1     jul tue   0.36
## 2     sep tue   0.43
## 3     sep mon   0.47
## 4     aug wed   0.55
## 5     aug fri   0.61
## 6     jul sat   0.71
## 7     aug wed   0.77
## 8     aug thu   0.90
## 9     mar mon   0.95
## 10    sep tue   0.96
## 11    aug tue   1.07
## 12    sep thu   1.12
## 13    jun fri   1.19
## 14    jul sun   1.36
## 15    jul sat   1.43
## 16    sep fri   1.46
## 17    sep sat   1.46
## 18    aug sun   1.56
## 19    sep sat   1.61
## 20    aug wed   1.63
## 21    aug wed   1.64
## 22    sep fri   1.69
## 23    mar mon   1.75
## 24    aug thu   1.90
```

## 25	mar sat	1.94
## 26	sep sat	1.95
## 27	sep sun	2.01
## 28	mar thu	2.14
## 29	aug wed	2.29
## 30	aug wed	2.51
## 31	mar fri	2.53
## 32	aug thu	2.55
## 33	sep wed	2.57
## 34	aug wed	2.69
## 35	aug sun	2.74
## 36	sep mon	3.07
## 37	aug sat	3.50
## 38	aug sat	4.53
## 39	apr thu	4.61
## 40	aug sun	4.69
## 41	sep wed	4.88
## 42	aug tue	5.23
## 43	sep sun	5.33
## 44	oct mon	5.44
## 45	feb sun	6.38
## 46	oct mon	6.83
## 47	aug fri	6.96
## 48	sep tue	7.04
## 49	mar sun	7.19
## 50	sep mon	7.30
## 51	mar sat	7.40
## 52	mar sun	8.24
## 53	mar fri	8.31
## 54	aug thu	8.68
## 55	aug tue	8.71
## 56	sep wed	9.41
## 57	aug tue	10.01
## 58	aug fri	10.02
## 59	apr thu	10.93
## 60	sep thu	11.06
## 61	sep tue	11.24
## 62	sep mon	11.32
## 63	sep tue	11.53
## 64	mar sun	12.10
## 65	feb sun	13.05
## 66	oct wed	13.70
## 67	mar sat	13.99
## 68	sep thu	14.57
## 69	aug sat	15.45
## 70	sep tue	17.20
## 71	sep fri	19.23
## 72	sep thu	23.41
## 73	oct sat	24.23
## 74	aug sat	26.00
## 75	sep fri	26.13
## 76	mar mon	27.35
## 77	mar sat	28.66
## 78	mar sat	28.66

## 79	sep sun	29.48
## 80	sep mon	30.32
## 81	sep wed	31.72
## 82	mar mon	31.86
## 83	aug sun	32.07
## 84	sep fri	35.88
## 85	mar mon	36.85
## 86	jul fri	37.02
## 87	sep wed	37.71
## 88	sep sun	48.55
## 89	oct mon	49.37
## 90	aug sat	58.30
## 91	sep sun	64.10
## 92	aug sat	71.30
## 93	sep wed	88.49
## 94	sep sun	95.18
## 95	sep tue	103.39
## 96	sep tue	105.66
## 97	sep sat	154.88
## 98	aug sun	196.48
## 99	sep sat	200.94
## 100	sep tue	212.88
## 101	sep sat	1090.84
## 102	aug sun	10.13
## 103	aug sun	2.87
## 104	aug sun	0.76
## 105	aug sun	0.09
## 106	aug wed	0.75
## 107	aug wed	2.47
## 108	aug wed	0.68
## 109	aug wed	0.24
## 110	aug wed	0.21
## 111	aug thu	1.52
## 112	aug thu	10.34
## 113	aug sat	8.02
## 114	aug sat	0.68
## 115	aug sat	1.38
## 116	aug mon	8.85
## 117	aug fri	3.30
## 118	aug fri	4.25
## 119	aug fri	1.56
## 120	aug fri	6.54
## 121	aug tue	0.79
## 122	aug tue	0.17
## 123	aug tue	4.40
## 124	aug tue	0.52
## 125	aug tue	9.27
## 126	aug tue	3.09
## 127	dec sun	8.98
## 128	dec wed	11.19
## 129	dec thu	5.38
## 130	dec mon	17.85
## 131	dec mon	10.73
## 132	dec mon	22.03

## 133	dec mon	9.77
## 134	dec fri	9.27
## 135	dec tue	24.77
## 136	feb wed	1.10
## 137	feb fri	24.24
## 138	jul sat	8.00
## 139	jul fri	2.64
## 140	jul tue	86.45
## 141	jul tue	6.57
## 142	jun sun	0.90
## 143	jun mon	3.52
## 144	sep sun	0.41
## 145	sep sun	5.18
## 146	sep sun	14.29
## 147	sep wed	1.58
## 148	sep thu	3.78
## 149	sep thu	4.41
## 150	sep thu	34.36
## 151	sep thu	7.21
## 152	sep thu	1.01
## 153	sep thu	2.18
## 154	sep thu	4.42
## 155	sep sat	3.33
## 156	sep sat	6.58
## 157	sep sat	15.64
## 158	sep sat	11.22
## 159	sep mon	2.13
## 160	sep mon	56.04
## 161	sep mon	7.48
## 162	sep mon	1.47
## 163	sep mon	3.93
## 164	sep mon	2.18
## 165	sep mon	6.10
## 166	sep mon	5.83
## 167	sep mon	28.19
## 168	sep fri	1.64
## 169	sep fri	3.71
## 170	sep fri	7.31
## 171	sep fri	2.03
## 172	sep fri	1.72
## 173	sep fri	5.97
## 174	sep fri	13.06
## 175	sep fri	1.26
## 176	sep fri	8.12
## 177	sep fri	1.09
## 178	sep fri	3.94
## 179	sep fri	0.52
## 180	sep tue	2.93
## 181	sep tue	5.65
## 182	sep tue	20.03
## 183	sep tue	1.75
## 184	sep sat	12.64
## 185	sep sun	11.06
## 186	sep fri	18.30



## 187	sep sat	39.35
## 188	aug sat	174.63
## 189	jul wed	7.73
## 190	aug thu	16.33
## 191	aug wed	5.86
## 192	aug thu	42.87
## 193	aug sat	12.18
## 194	aug sun	16.00
## 195	sep sun	24.59
## 196	aug fri	28.74
## 197	feb mon	9.96
## 198	sep fri	30.18
## 199	sep sun	70.76
## 200	feb sun	51.78
## 201	sep sun	3.64
## 202	aug sun	3.63
## 203	jul wed	8.16
## 204	sep thu	4.95
## 205	sep wed	6.04
## 206	sep sat	3.95
## 207	sep fri	7.80
## 208	feb fri	4.62
## 209	jul mon	1.63
## 210	aug thu	746.28
## 211	jul tue	7.02
## 212	aug sun	2.44
## 213	aug sun	3.05
## 214	aug wed	185.76
## 215	jul sun	6.30
## 216	sep sat	0.72
## 217	aug sat	4.96
## 218	aug mon	2.35
## 219	aug sun	3.20
## 220	aug sat	6.36
## 221	aug sun	15.34
## 222	aug mon	0.54
## 223	aug sat	6.43
## 224	sep fri	0.33
## 225	aug mon	1.23
## 226	apr mon	3.35
## 227	sep fri	9.96
## 228	aug wed	6.43
## 229	aug fri	9.71
## 230	aug wed	82.75
## 231	aug sat	3.32
## 232	aug sat	1.94
## 233	sep sun	3.71
## 234	feb tue	5.39
## 235	feb tue	2.14
## 236	feb sat	6.84
## 237	mar mon	3.18
## 238	mar wed	5.55
## 239	mar thu	6.61
## 240	apr sun	61.13

```
## 241 may fri 38.48
## 242 jun mon 1.94
## 243 jun sat 70.32
## 244 jun thu 10.08
## 245 jun thu 3.19
## 246 jul thu 1.76
## 247 jul sun 7.36
## 248 jul sun 2.21
## 249 jul mon 278.53
## 250 jul thu 2.75
## 251 aug sun 1.29
## 252 aug sun 26.43
## 253 aug mon 2.07
## 254 aug tue 2.00
## 255 aug tue 16.40
## 256 aug tue 46.70
## 257 aug fri 43.32
## 258 aug sat 8.59
## 259 aug mon 2.77
## 260 aug tue 14.68
## 261 aug tue 40.54
## 262 aug tue 10.82
## 263 aug wed 1.95
## 264 aug wed 49.59
## 265 aug thu 5.80
## 266 aug fri 2.17
## 267 aug fri 0.43
## 268 aug sun 6.44
## 269 aug sun 54.29
## 270 aug sun 11.16
```

#### 4. How large are the five largest fires (i.e., having largest area)

```
q4.1 <- arrange(forestfires, area)
q4.2 <- tail(q4.1, n=5)
q4.2$area
```

```
## [1] 200.94 212.88 278.53 746.28 1090.84
```

##### a. What are the corresponding month, temp, RH, wind, rain area?

```
q4.a <- select(q4.2, month, temp, RH, wind, rain, area)
q4.a
```

```
## month temp RH wind rain area
## 513 sep 18.2 46 1.8 0 200.94
## 514 sep 18.8 40 2.2 0 212.88
## 515 jul 22.6 57 4.9 0 278.53
## 516 aug 27.5 27 4.9 0 746.28
## 517 sep 25.1 27 4.0 0 1090.84
```

b. Add one column to the data indicating whether a fire occurred for each observation (True for area>0 and False for area ==0)

```
q4.b <- mutate(forestfires, occurred=area>0)
q4.b
```

##	X	Y	month	day	FFMC	DMC	DC	ISI	temp	RH	wind	rain	area
## 1	7	5	mar	fri	86.2	26.2	94.3	5.1	8.2	51	6.7	0.0	0.00
## 2	7	4	oct	tue	90.6	35.4	669.1	6.7	18.0	33	0.9	0.0	0.00
## 3	7	4	oct	sat	90.6	43.7	686.9	6.7	14.6	33	1.3	0.0	0.00
## 4	8	6	mar	fri	91.7	33.3	77.5	9.0	8.3	97	4.0	0.2	0.00
## 5	8	6	mar	sun	89.3	51.3	102.2	9.6	11.4	99	1.8	0.0	0.00
## 6	8	6	aug	sun	92.3	85.3	488.0	14.7	22.2	29	5.4	0.0	0.00
## 7	8	6	aug	mon	92.3	88.9	495.6	8.5	24.1	27	3.1	0.0	0.00
## 8	8	6	aug	mon	91.5	145.4	608.2	10.7	8.0	86	2.2	0.0	0.00
## 9	8	6	sep	tue	91.0	129.5	692.6	7.0	13.1	63	5.4	0.0	0.00
## 10	7	5	sep	sat	92.5	88.0	698.6	7.1	22.8	40	4.0	0.0	0.00
## 11	7	5	sep	sat	92.5	88.0	698.6	7.1	17.8	51	7.2	0.0	0.00
## 12	7	5	sep	sat	92.8	73.2	713.0	22.6	19.3	38	4.0	0.0	0.00
## 13	6	5	aug	fri	63.5	70.8	665.3	0.8	17.0	72	6.7	0.0	0.00
## 14	6	5	sep	mon	90.9	126.5	686.5	7.0	21.3	42	2.2	0.0	0.00
## 15	6	5	sep	wed	92.9	133.3	699.6	9.2	26.4	21	4.5	0.0	0.00
## 16	6	5	sep	fri	93.3	141.2	713.9	13.9	22.9	44	5.4	0.0	0.00
## 17	5	5	mar	sat	91.7	35.8	80.8	7.8	15.1	27	5.4	0.0	0.00
## 18	8	5	oct	mon	84.9	32.8	664.2	3.0	16.7	47	4.9	0.0	0.00
## 19	6	4	mar	wed	89.2	27.9	70.8	6.3	15.9	35	4.0	0.0	0.00
## 20	6	4	apr	sat	86.3	27.4	97.1	5.1	9.3	44	4.5	0.0	0.00
## 21	6	4	sep	tue	91.0	129.5	692.6	7.0	18.3	40	2.7	0.0	0.00
## 22	5	4	sep	mon	91.8	78.5	724.3	9.2	19.1	38	2.7	0.0	0.00
## 23	7	4	jun	sun	94.3	96.3	200.0	56.1	21.0	44	4.5	0.0	0.00
## 24	7	4	aug	sat	90.2	110.9	537.4	6.2	19.5	43	5.8	0.0	0.00
## 25	7	4	aug	sat	93.5	139.4	594.2	20.3	23.7	32	5.8	0.0	0.00
## 26	7	4	aug	sun	91.4	142.4	601.4	10.6	16.3	60	5.4	0.0	0.00
## 27	7	4	sep	fri	92.4	117.9	668.0	12.2	19.0	34	5.8	0.0	0.00
## 28	7	4	sep	mon	90.9	126.5	686.5	7.0	19.4	48	1.3	0.0	0.00
## 29	6	3	sep	sat	93.4	145.4	721.4	8.1	30.2	24	2.7	0.0	0.00
## 30	6	3	sep	sun	93.5	149.3	728.6	8.1	22.8	39	3.6	0.0	0.00
## 31	6	3	sep	fri	94.3	85.1	692.3	15.9	25.4	24	3.6	0.0	0.00
## 32	6	3	sep	mon	88.6	91.8	709.9	7.1	11.2	78	7.6	0.0	0.00
## 33	6	3	sep	fri	88.6	69.7	706.8	5.8	20.6	37	1.8	0.0	0.00
## 34	6	3	sep	sun	91.7	75.6	718.3	7.8	17.7	39	3.6	0.0	0.00
## 35	6	3	sep	mon	91.8	78.5	724.3	9.2	21.2	32	2.7	0.0	0.00
## 36	6	3	sep	tue	90.3	80.7	730.2	6.3	18.2	62	4.5	0.0	0.00
## 37	6	3	oct	tue	90.6	35.4	669.1	6.7	21.7	24	4.5	0.0	0.00
## 38	7	4	oct	fri	90.0	41.5	682.6	8.7	11.3	60	5.4	0.0	0.00
## 39	7	3	oct	sat	90.6	43.7	686.9	6.7	17.8	27	4.0	0.0	0.00
## 40	4	4	mar	tue	88.1	25.7	67.6	3.8	14.1	43	2.7	0.0	0.00
## 41	4	4	jul	tue	79.5	60.6	366.7	1.5	23.3	37	3.1	0.0	0.00
## 42	4	4	aug	sat	90.2	96.9	624.2	8.9	18.4	42	6.7	0.0	0.00
## 43	4	4	aug	tue	94.8	108.3	647.1	17.0	16.6	54	5.4	0.0	0.00
## 44	4	4	sep	sat	92.5	88.0	698.6	7.1	19.6	48	2.7	0.0	0.00
## 45	4	4	sep	wed	90.1	82.9	735.7	6.2	12.9	74	4.9	0.0	0.00
## 46	5	6	sep	wed	94.3	85.1	692.3	15.9	25.9	24	4.0	0.0	0.00

## 47	5 6	sep mon	90.9	126.5	686.5	7.0	14.7	70	3.6	0.0	0.00
## 48	6 6	jul mon	94.2	62.3	442.9	11.0	23.0	36	3.1	0.0	0.00
## 49	4 4	mar mon	87.2	23.9	64.7	4.1	11.8	35	1.8	0.0	0.00
## 50	4 4	mar mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	0.00
## 51	4 4	sep thu	92.9	137.0	706.4	9.2	20.8	17	1.3	0.0	0.00
## 52	4 3	aug sun	90.2	99.6	631.2	6.3	21.5	34	2.2	0.0	0.00
## 53	4 3	aug wed	92.1	111.2	654.1	9.6	20.4	42	4.9	0.0	0.00
## 54	4 3	aug wed	92.1	111.2	654.1	9.6	20.4	42	4.9	0.0	0.00
## 55	4 3	aug thu	91.7	114.3	661.3	6.3	17.6	45	3.6	0.0	0.00
## 56	4 3	sep thu	92.9	137.0	706.4	9.2	27.7	24	2.2	0.0	0.00
## 57	4 3	sep tue	90.3	80.7	730.2	6.3	17.8	63	4.9	0.0	0.00
## 58	4 3	oct sun	92.6	46.5	691.8	8.8	13.8	50	2.7	0.0	0.00
## 59	2 2	feb mon	84.0	9.3	34.0	2.1	13.9	40	5.4	0.0	0.00
## 60	2 2	feb fri	86.6	13.2	43.0	5.3	12.3	51	0.9	0.0	0.00
## 61	2 2	mar sun	89.3	51.3	102.2	9.6	11.5	39	5.8	0.0	0.00
## 62	2 2	mar sun	89.3	51.3	102.2	9.6	5.5	59	6.3	0.0	0.00
## 63	2 2	aug thu	93.0	75.3	466.6	7.7	18.8	35	4.9	0.0	0.00
## 64	2 2	aug sun	90.2	99.6	631.2	6.3	20.8	33	2.7	0.0	0.00
## 65	2 2	aug mon	91.1	103.2	638.8	5.8	23.1	31	3.1	0.0	0.00
## 66	2 2	aug thu	91.7	114.3	661.3	6.3	18.6	44	4.5	0.0	0.00
## 67	2 2	sep fri	92.4	117.9	668.0	12.2	23.0	37	4.5	0.0	0.00
## 68	2 2	sep fri	92.4	117.9	668.0	12.2	19.6	33	5.4	0.0	0.00
## 69	2 2	sep fri	92.4	117.9	668.0	12.2	19.6	33	6.3	0.0	0.00
## 70	4 5	mar fri	91.7	33.3	77.5	9.0	17.2	26	4.5	0.0	0.00
## 71	4 5	mar fri	91.2	48.3	97.8	12.5	15.8	27	7.6	0.0	0.00
## 72	4 5	sep fri	94.3	85.1	692.3	15.9	17.7	37	3.6	0.0	0.00
## 73	5 4	mar fri	91.7	33.3	77.5	9.0	15.6	25	6.3	0.0	0.00
## 74	5 4	aug tue	88.8	147.3	614.5	9.0	17.3	43	4.5	0.0	0.00
## 75	5 4	sep fri	93.3	141.2	713.9	13.9	27.6	30	1.3	0.0	0.00
## 76	9 9	feb thu	84.2	6.8	26.6	7.7	6.7	79	3.1	0.0	0.00
## 77	9 9	feb fri	86.6	13.2	43.0	5.3	15.7	43	3.1	0.0	0.00
## 78	1 3	mar mon	87.6	52.2	103.8	5.0	8.3	72	3.1	0.0	0.00
## 79	1 2	aug fri	90.1	108.0	529.8	12.5	14.7	66	2.7	0.0	0.00
## 80	1 2	aug tue	91.0	121.2	561.6	7.0	21.6	19	6.7	0.0	0.00
## 81	1 2	aug sun	91.4	142.4	601.4	10.6	19.5	39	6.3	0.0	0.00
## 82	1 2	aug sun	90.2	99.6	631.2	6.3	17.9	44	2.2	0.0	0.00
## 83	1 2	aug tue	94.8	108.3	647.1	17.0	18.6	51	4.5	0.0	0.00
## 84	1 2	aug wed	92.1	111.2	654.1	9.6	16.6	47	0.9	0.0	0.00
## 85	1 2	aug thu	91.7	114.3	661.3	6.3	20.2	45	3.6	0.0	0.00
## 86	1 2	sep thu	92.9	137.0	706.4	9.2	21.5	15	0.9	0.0	0.00
## 87	1 2	sep thu	92.9	137.0	706.4	9.2	25.4	27	2.2	0.0	0.00
## 88	1 2	sep thu	92.9	137.0	706.4	9.2	22.4	34	2.2	0.0	0.00
## 89	1 2	sep sun	93.5	149.3	728.6	8.1	25.3	36	3.6	0.0	0.00
## 90	6 5	mar sat	91.7	35.8	80.8	7.8	17.4	25	4.9	0.0	0.00
## 91	6 5	aug sat	90.2	96.9	624.2	8.9	14.7	59	5.8	0.0	0.00
## 92	8 6	mar fri	91.7	35.8	80.8	7.8	17.4	24	5.4	0.0	0.00
## 93	8 6	aug sun	92.3	85.3	488.0	14.7	20.8	32	6.3	0.0	0.00
## 94	8 6	aug sun	91.4	142.4	601.4	10.6	18.2	43	4.9	0.0	0.00
## 95	8 6	aug mon	91.1	103.2	638.8	5.8	23.4	22	2.7	0.0	0.00
## 96	4 4	sep sun	89.7	90.0	704.4	4.8	17.8	64	1.3	0.0	0.00
## 97	3 4	feb sat	83.9	8.0	30.2	2.6	12.7	48	1.8	0.0	0.00
## 98	3 4	mar sat	69.0	2.4	15.5	0.7	17.4	24	5.4	0.0	0.00
## 99	3 4	aug sun	91.4	142.4	601.4	10.6	11.6	87	4.5	0.0	0.00
## 100	3 4	aug sun	91.4	142.4	601.4	10.6	19.8	39	5.4	0.0	0.00

##	101	3	4	aug	sun	91.4	142.4	601.4	10.6	19.8	39	5.4	0.0	0.00
##	102	3	4	aug	tue	88.8	147.3	614.5	9.0	14.4	66	5.4	0.0	0.00
##	103	2	4	aug	tue	94.8	108.3	647.1	17.0	20.1	40	4.0	0.0	0.00
##	104	2	4	sep	sat	92.5	121.1	674.4	8.6	24.1	29	4.5	0.0	0.00
##	105	2	4	jan	sat	82.1	3.7	9.3	2.9	5.3	78	3.1	0.0	0.00
##	106	4	5	mar	fri	85.9	19.5	57.3	2.8	12.7	52	6.3	0.0	0.00
##	107	4	5	mar	thu	91.4	30.7	74.3	7.5	18.2	29	3.1	0.0	0.00
##	108	4	5	aug	sun	90.2	99.6	631.2	6.3	21.4	33	3.1	0.0	0.00
##	109	4	5	sep	sat	92.5	88.0	698.6	7.1	20.3	45	3.1	0.0	0.00
##	110	4	5	sep	mon	88.6	91.8	709.9	7.1	17.4	56	5.4	0.0	0.00
##	111	4	4	mar	fri	85.9	19.5	57.3	2.8	13.7	43	5.8	0.0	0.00
##	112	3	4	mar	fri	91.7	33.3	77.5	9.0	18.8	18	4.5	0.0	0.00
##	113	3	4	sep	sun	89.7	90.0	704.4	4.8	22.8	39	3.6	0.0	0.00
##	114	3	4	sep	mon	91.8	78.5	724.3	9.2	18.9	35	2.7	0.0	0.00
##	115	3	4	mar	tue	88.1	25.7	67.6	3.8	15.8	27	7.6	0.0	0.00
##	116	3	5	mar	tue	88.1	25.7	67.6	3.8	15.5	27	6.3	0.0	0.00
##	117	3	4	mar	sat	91.7	35.8	80.8	7.8	11.6	30	6.3	0.0	0.00
##	118	3	4	mar	sat	91.7	35.8	80.8	7.8	15.2	27	4.9	0.0	0.00
##	119	3	4	mar	mon	90.1	39.7	86.6	6.2	10.6	30	4.0	0.0	0.00
##	120	3	4	aug	thu	93.0	75.3	466.6	7.7	19.6	36	3.1	0.0	0.00
##	121	3	4	aug	mon	91.5	145.4	608.2	10.7	10.3	74	2.2	0.0	0.00
##	122	3	4	aug	mon	91.5	145.4	608.2	10.7	17.1	43	5.4	0.0	0.00
##	123	3	4	sep	sun	92.4	124.1	680.7	8.5	22.5	42	5.4	0.0	0.00
##	124	3	4	sep	tue	84.4	73.4	671.9	3.2	17.9	45	3.1	0.0	0.00
##	125	3	4	sep	fri	94.3	85.1	692.3	15.9	19.8	50	5.4	0.0	0.00
##	126	3	4	oct	sun	92.6	46.5	691.8	8.8	20.6	24	5.4	0.0	0.00
##	127	3	5	mar	mon	87.6	52.2	103.8	5.0	9.0	49	2.2	0.0	0.00
##	128	3	5	sep	fri	93.5	149.3	728.6	8.1	17.2	43	3.1	0.0	0.00
##	129	3	5	oct	wed	91.4	37.9	673.8	5.2	15.9	46	3.6	0.0	0.00
##	130	2	5	oct	sun	92.6	46.5	691.8	8.8	15.4	35	0.9	0.0	0.00
##	131	4	6	feb	sat	68.2	21.5	87.2	0.8	15.4	40	2.7	0.0	0.00
##	132	4	6	mar	mon	87.2	23.9	64.7	4.1	14.0	39	3.1	0.0	0.00
##	133	4	6	mar	sun	89.3	51.3	102.2	9.6	10.6	46	4.9	0.0	0.00
##	134	4	6	sep	thu	93.7	80.9	685.2	17.9	17.6	42	3.1	0.0	0.00
##	135	3	5	mar	tue	88.1	25.7	67.6	3.8	14.9	38	2.7	0.0	0.00
##	136	3	5	aug	sat	93.5	139.4	594.2	20.3	17.6	52	5.8	0.0	0.00
##	137	3	6	sep	sun	92.4	124.1	680.7	8.5	17.2	58	1.3	0.0	0.00
##	138	3	6	sep	mon	90.9	126.5	686.5	7.0	15.6	66	3.1	0.0	0.00
##	139	9	9	jul	tue	85.8	48.3	313.4	3.9	18.0	42	2.7	0.0	0.36
##	140	1	4	sep	tue	91.0	129.5	692.6	7.0	21.7	38	2.2	0.0	0.43
##	141	2	5	sep	mon	90.9	126.5	686.5	7.0	21.9	39	1.8	0.0	0.47
##	142	1	2	aug	wed	95.5	99.9	513.3	13.2	23.3	31	4.5	0.0	0.55
##	143	8	6	aug	fri	90.1	108.0	529.8	12.5	21.2	51	8.9	0.0	0.61
##	144	1	2	jul	sat	90.0	51.3	296.3	8.7	16.6	53	5.4	0.0	0.71
##	145	2	5	aug	wed	95.5	99.9	513.3	13.2	23.8	32	5.4	0.0	0.77
##	146	6	5	aug	thu	95.2	131.7	578.8	10.4	27.4	22	4.0	0.0	0.90
##	147	5	4	mar	mon	90.1	39.7	86.6	6.2	13.2	40	5.4	0.0	0.95
##	148	8	3	sep	tue	84.4	73.4	671.9	3.2	24.2	28	3.6	0.0	0.96
##	149	2	2	aug	tue	94.8	108.3	647.1	17.0	17.4	43	6.7	0.0	1.07
##	150	8	6	sep	thu	93.7	80.9	685.2	17.9	23.7	25	4.5	0.0	1.12
##	151	6	5	jun	fri	92.5	56.4	433.3	7.1	23.2	39	5.4	0.0	1.19
##	152	9	9	jul	sun	90.1	68.6	355.2	7.2	24.8	29	2.2	0.0	1.36
##	153	3	4	jul	sat	90.1	51.2	424.1	6.2	24.6	43	1.8	0.0	1.43
##	154	5	4	sep	fri	94.3	85.1	692.3	15.9	20.1	47	4.9	0.0	1.46

##	155	1	5	sep	sat	93.4	145.4	721.4	8.1	29.6	27	2.7	0.0	1.46
##	156	7	4	aug	sun	94.8	108.3	647.1	17.0	16.4	47	1.3	0.0	1.56
##	157	2	4	sep	sat	93.4	145.4	721.4	8.1	28.6	27	2.2	0.0	1.61
##	158	2	2	aug	wed	92.1	111.2	654.1	9.6	18.4	45	3.6	0.0	1.63
##	159	2	4	aug	wed	92.1	111.2	654.1	9.6	20.5	35	4.0	0.0	1.64
##	160	7	4	sep	fri	92.4	117.9	668.0	12.2	19.0	34	5.8	0.0	1.69
##	161	7	4	mar	mon	90.1	39.7	86.6	6.2	16.1	29	3.1	0.0	1.75
##	162	6	4	aug	thu	95.2	131.7	578.8	10.4	20.3	41	4.0	0.0	1.90
##	163	6	3	mar	sat	90.6	50.1	100.4	7.8	15.2	31	8.5	0.0	1.94
##	164	8	6	sep	sat	92.5	121.1	674.4	8.6	17.8	56	1.8	0.0	1.95
##	165	8	5	sep	sun	89.7	90.0	704.4	4.8	17.8	67	2.2	0.0	2.01
##	166	6	5	mar	thu	84.9	18.2	55.0	3.0	5.3	70	4.5	0.0	2.14
##	167	6	5	aug	wed	92.1	111.2	654.1	9.6	16.6	47	0.9	0.0	2.29
##	168	6	5	aug	wed	96.0	127.1	570.5	16.5	23.4	33	4.5	0.0	2.51
##	169	6	5	mar	fri	91.2	48.3	97.8	12.5	14.6	26	9.4	0.0	2.53
##	170	8	6	aug	thu	95.2	131.7	578.8	10.4	20.7	45	2.2	0.0	2.55
##	171	5	4	sep	wed	92.9	133.3	699.6	9.2	21.9	35	1.8	0.0	2.57
##	172	8	6	aug	wed	85.6	90.4	609.6	6.6	17.4	50	4.0	0.0	2.69
##	173	7	4	aug	sun	91.4	142.4	601.4	10.6	20.1	39	5.4	0.0	2.74
##	174	4	4	sep	mon	90.9	126.5	686.5	7.0	17.7	39	2.2	0.0	3.07
##	175	1	4	aug	sat	90.2	96.9	624.2	8.9	14.2	53	1.8	0.0	3.50
##	176	1	4	aug	sat	90.2	96.9	624.2	8.9	20.3	39	4.9	0.0	4.53
##	177	6	5	apr	thu	81.5	9.1	55.2	2.7	5.8	54	5.8	0.0	4.61
##	178	2	5	aug	sun	90.2	99.6	631.2	6.3	19.2	44	2.7	0.0	4.69
##	179	2	5	sep	wed	90.1	82.9	735.7	6.2	18.3	45	2.2	0.0	4.88
##	180	8	6	aug	tue	88.8	147.3	614.5	9.0	14.4	66	5.4	0.0	5.23
##	181	1	3	sep	sun	92.4	124.1	680.7	8.5	23.9	32	6.7	0.0	5.33
##	182	8	6	oct	mon	84.9	32.8	664.2	3.0	19.1	32	4.0	0.0	5.44
##	183	5	4	feb	sun	86.8	15.6	48.3	3.9	12.4	53	2.2	0.0	6.38
##	184	7	4	oct	mon	91.7	48.5	696.1	11.1	16.8	45	4.5	0.0	6.83
##	185	8	6	aug	fri	93.9	135.7	586.7	15.1	20.8	34	4.9	0.0	6.96
##	186	2	5	sep	tue	91.0	129.5	692.6	7.0	17.6	46	3.1	0.0	7.04
##	187	8	6	mar	sun	89.3	51.3	102.2	9.6	11.5	39	5.8	0.0	7.19
##	188	1	5	sep	mon	90.9	126.5	686.5	7.0	21.0	42	2.2	0.0	7.30
##	189	6	4	mar	sat	90.8	41.9	89.4	7.9	13.3	42	0.9	0.0	7.40
##	190	7	4	mar	sun	90.7	44.0	92.4	5.5	11.5	60	4.0	0.0	8.24
##	191	6	5	mar	fri	91.2	48.3	97.8	12.5	11.7	33	4.0	0.0	8.31
##	192	2	5	aug	thu	95.2	131.7	578.8	10.4	24.2	28	2.7	0.0	8.68
##	193	2	2	aug	tue	94.8	108.3	647.1	17.0	24.6	22	4.5	0.0	8.71
##	194	4	5	sep	wed	92.9	133.3	699.6	9.2	24.3	25	4.0	0.0	9.41
##	195	2	2	aug	tue	94.8	108.3	647.1	17.0	24.6	22	4.5	0.0	10.01
##	196	2	5	aug	fri	93.9	135.7	586.7	15.1	23.5	36	5.4	0.0	10.02
##	197	6	5	apr	thu	81.5	9.1	55.2	2.7	5.8	54	5.8	0.0	10.93
##	198	4	5	sep	thu	92.9	137.0	706.4	9.2	21.5	15	0.9	0.0	11.06
##	199	3	4	sep	tue	91.0	129.5	692.6	7.0	13.9	59	6.3	0.0	11.24
##	200	2	4	sep	mon	63.5	70.8	665.3	0.8	22.6	38	3.6	0.0	11.32
##	201	1	5	sep	tue	91.0	129.5	692.6	7.0	21.6	33	2.2	0.0	11.53
##	202	6	5	mar	sun	90.1	37.6	83.7	7.2	12.4	54	3.6	0.0	12.10
##	203	7	4	feb	sun	83.9	8.7	32.1	2.1	8.8	68	2.2	0.0	13.05
##	204	8	6	oct	wed	91.4	37.9	673.8	5.2	20.2	37	2.7	0.0	13.70
##	205	5	6	mar	sat	90.6	50.1	100.4	7.8	15.1	64	4.0	0.0	13.99
##	206	4	5	sep	thu	92.9	137.0	706.4	9.2	22.1	34	1.8	0.0	14.57
##	207	2	2	aug	sat	93.5	139.4	594.2	20.3	22.9	31	7.2	0.0	15.45
##	208	7	5	sep	tue	91.0	129.5	692.6	7.0	20.7	37	2.2	0.0	17.20

##	209	6	5	sep	fri	92.4	117.9	668.0	12.2	19.6	33	6.3	0.0	19.23
##	210	8	3	sep	thu	93.7	80.9	685.2	17.9	23.2	26	4.9	0.0	23.41
##	211	4	4	oct	sat	90.6	43.7	686.9	6.7	18.4	25	3.1	0.0	24.23
##	212	7	4	aug	sat	93.5	139.4	594.2	20.3	5.1	96	5.8	0.0	26.00
##	213	7	4	sep	fri	94.3	85.1	692.3	15.9	20.1	47	4.9	0.0	26.13
##	214	7	3	mar	mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	27.35
##	215	4	4	mar	sat	91.7	35.8	80.8	7.8	17.0	27	4.9	0.0	28.66
##	216	4	4	mar	sat	91.7	35.8	80.8	7.8	17.0	27	4.9	0.0	28.66
##	217	4	4	sep	sun	92.4	124.1	680.7	8.5	16.9	60	1.3	0.0	29.48
##	218	1	3	sep	mon	88.6	91.8	709.9	7.1	12.4	73	6.3	0.0	30.32
##	219	4	5	sep	wed	92.9	133.3	699.6	9.2	19.4	19	1.3	0.0	31.72
##	220	6	5	mar	mon	90.1	39.7	86.6	6.2	15.2	27	3.1	0.0	31.86
##	221	8	6	aug	sun	90.2	99.6	631.2	6.3	16.2	59	3.1	0.0	32.07
##	222	3	4	sep	fri	93.3	141.2	713.9	13.9	18.6	49	3.6	0.0	35.88
##	223	4	3	mar	mon	87.6	52.2	103.8	5.0	11.0	46	5.8	0.0	36.85
##	224	2	2	jul	fri	88.3	150.3	309.9	6.8	13.4	79	3.6	0.0	37.02
##	225	7	4	sep	wed	90.1	82.9	735.7	6.2	15.4	57	4.5	0.0	37.71
##	226	4	4	sep	sun	93.5	149.3	728.6	8.1	22.9	39	4.9	0.0	48.55
##	227	7	5	oct	mon	91.7	48.5	696.1	11.1	16.1	44	4.0	0.0	49.37
##	228	8	6	aug	sat	92.2	81.8	480.8	11.9	20.1	34	4.5	0.0	58.30
##	229	4	6	sep	sun	93.5	149.3	728.6	8.1	28.3	26	3.1	0.0	64.10
##	230	8	6	aug	sat	92.2	81.8	480.8	11.9	16.4	43	4.0	0.0	71.30
##	231	4	4	sep	wed	92.9	133.3	699.6	9.2	26.4	21	4.5	0.0	88.49
##	232	1	5	sep	sun	93.5	149.3	728.6	8.1	27.8	27	3.1	0.0	95.18
##	233	6	4	sep	tue	91.0	129.5	692.6	7.0	18.7	43	2.7	0.0	103.39
##	234	9	4	sep	tue	84.4	73.4	671.9	3.2	24.3	36	3.1	0.0	105.66
##	235	4	5	sep	sat	92.5	121.1	674.4	8.6	17.7	25	3.1	0.0	154.88
##	236	8	6	aug	sun	91.4	142.4	601.4	10.6	19.6	41	5.8	0.0	196.48
##	237	2	2	sep	sat	92.5	121.1	674.4	8.6	18.2	46	1.8	0.0	200.94
##	238	1	2	sep	tue	91.0	129.5	692.6	7.0	18.8	40	2.2	0.0	212.88
##	239	6	5	sep	sat	92.5	121.1	674.4	8.6	25.1	27	4.0	0.0	1090.84
##	240	7	5	apr	sun	81.9	3.0	7.9	3.5	13.4	75	1.8	0.0	0.00
##	241	6	3	apr	wed	88.0	17.2	43.5	3.8	15.2	51	2.7	0.0	0.00
##	242	4	4	apr	fri	83.0	23.3	85.3	2.3	16.7	20	3.1	0.0	0.00
##	243	2	4	aug	sun	94.2	122.3	589.9	12.9	15.4	66	4.0	0.0	10.13
##	244	7	4	aug	sun	91.8	175.1	700.7	13.8	21.9	73	7.6	1.0	0.00
##	245	2	4	aug	sun	91.8	175.1	700.7	13.8	22.4	54	7.6	0.0	2.87
##	246	3	4	aug	sun	91.8	175.1	700.7	13.8	26.8	38	6.3	0.0	0.76
##	247	5	4	aug	sun	91.8	175.1	700.7	13.8	25.7	39	5.4	0.0	0.09
##	248	2	4	aug	wed	92.2	91.6	503.6	9.6	20.7	70	2.2	0.0	0.75
##	249	8	6	aug	wed	93.1	157.3	666.7	13.5	28.7	28	2.7	0.0	0.00
##	250	3	4	aug	wed	93.1	157.3	666.7	13.5	21.7	40	0.4	0.0	2.47
##	251	8	5	aug	wed	93.1	157.3	666.7	13.5	26.8	25	3.1	0.0	0.68
##	252	8	5	aug	wed	93.1	157.3	666.7	13.5	24.0	36	3.1	0.0	0.24
##	253	6	5	aug	wed	93.1	157.3	666.7	13.5	22.1	37	3.6	0.0	0.21
##	254	7	4	aug	thu	91.9	109.2	565.5	8.0	21.4	38	2.7	0.0	1.52
##	255	6	3	aug	thu	91.6	138.1	621.7	6.3	18.9	41	3.1	0.0	10.34
##	256	2	5	aug	thu	87.5	77.0	694.8	5.0	22.3	46	4.0	0.0	0.00
##	257	8	6	aug	sat	94.2	117.2	581.1	11.0	23.9	41	2.2	0.0	8.02
##	258	4	3	aug	sat	94.2	117.2	581.1	11.0	21.4	44	2.7	0.0	0.68
##	259	3	4	aug	sat	91.8	170.9	692.3	13.7	20.6	59	0.9	0.0	0.00
##	260	7	4	aug	sat	91.8	170.9	692.3	13.7	23.7	40	1.8	0.0	1.38
##	261	2	4	aug	mon	93.6	97.9	542.0	14.4	28.3	32	4.0	0.0	8.85
##	262	3	4	aug	fri	91.6	112.4	573.0	8.9	11.2	84	7.6	0.0	3.30

##	263	2	4	aug	fri	91.6	112.4	573.0	8.9	21.4	42	3.1	0.0	4.25
##	264	6	3	aug	fri	91.1	141.1	629.1	7.1	19.3	39	3.6	0.0	1.56
##	265	4	4	aug	fri	94.3	167.6	684.4	13.0	21.8	53	3.1	0.0	6.54
##	266	4	4	aug	tue	93.7	102.2	550.3	14.6	22.1	54	7.6	0.0	0.79
##	267	6	5	aug	tue	94.3	131.7	607.1	22.7	19.4	55	4.0	0.0	0.17
##	268	2	2	aug	tue	92.1	152.6	658.2	14.3	23.7	24	3.1	0.0	0.00
##	269	3	4	aug	tue	92.1	152.6	658.2	14.3	21.0	32	3.1	0.0	0.00
##	270	4	4	aug	tue	92.1	152.6	658.2	14.3	19.1	53	2.7	0.0	4.40
##	271	2	2	aug	tue	92.1	152.6	658.2	14.3	21.8	56	3.1	0.0	0.52
##	272	8	6	aug	tue	92.1	152.6	658.2	14.3	20.1	58	4.5	0.0	9.27
##	273	2	5	aug	tue	92.1	152.6	658.2	14.3	20.2	47	4.0	0.0	3.09
##	274	4	6	dec	sun	84.4	27.2	353.5	6.8	4.8	57	8.5	0.0	8.98
##	275	8	6	dec	wed	84.0	27.8	354.6	5.3	5.1	61	8.0	0.0	11.19
##	276	4	6	dec	thu	84.6	26.4	352.0	2.0	5.1	61	4.9	0.0	5.38
##	277	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	17.85
##	278	3	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	10.73
##	279	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	22.03
##	280	4	4	dec	mon	85.4	25.4	349.7	2.6	4.6	21	8.5	0.0	9.77
##	281	4	6	dec	fri	84.7	26.7	352.6	4.1	2.2	59	4.9	0.0	9.27
##	282	6	5	dec	tue	85.4	25.4	349.7	2.6	5.1	24	8.5	0.0	24.77
##	283	6	3	feb	sun	84.9	27.5	353.5	3.4	4.2	51	4.0	0.0	0.00
##	284	3	4	feb	wed	86.9	6.6	18.7	3.2	8.8	35	3.1	0.0	1.10
##	285	5	4	feb	fri	85.2	4.9	15.8	6.3	7.5	46	8.0	0.0	24.24
##	286	2	5	jul	sun	93.9	169.7	411.8	12.3	23.4	40	6.3	0.0	0.00
##	287	7	6	jul	wed	91.2	183.1	437.7	12.5	12.6	90	7.6	0.2	0.00
##	288	7	4	jul	sat	91.6	104.2	474.9	9.0	22.1	49	2.7	0.0	0.00
##	289	7	4	jul	sat	91.6	104.2	474.9	9.0	24.2	32	1.8	0.0	0.00
##	290	7	4	jul	sat	91.6	104.2	474.9	9.0	24.3	30	1.8	0.0	0.00
##	291	2	5	jul	sat	91.6	104.2	474.9	9.0	18.7	53	1.8	0.0	0.00
##	292	9	4	jul	sat	91.6	104.2	474.9	9.0	25.3	39	0.9	0.0	8.00
##	293	4	5	jul	fri	91.6	100.2	466.3	6.3	22.9	40	1.3	0.0	2.64
##	294	7	6	jul	tue	93.1	180.4	430.8	11.0	26.9	28	5.4	0.0	86.45
##	295	8	6	jul	tue	92.3	88.8	440.9	8.5	17.1	67	3.6	0.0	6.57
##	296	7	5	jun	sun	93.1	180.4	430.8	11.0	22.2	48	1.3	0.0	0.00
##	297	6	4	jun	sun	90.4	89.5	290.8	6.4	14.3	46	1.8	0.0	0.90
##	298	8	6	jun	sun	90.4	89.5	290.8	6.4	15.4	45	2.2	0.0	0.00
##	299	8	6	jun	wed	91.2	147.8	377.2	12.7	19.6	43	4.9	0.0	0.00
##	300	6	5	jun	sat	53.4	71.0	233.8	0.4	10.6	90	2.7	0.0	0.00
##	301	6	5	jun	mon	90.4	93.3	298.1	7.5	20.7	25	4.9	0.0	0.00
##	302	6	5	jun	mon	90.4	93.3	298.1	7.5	19.1	39	5.4	0.0	3.52
##	303	3	6	jun	fri	91.1	94.1	232.1	7.1	19.2	38	4.5	0.0	0.00
##	304	3	6	jun	fri	91.1	94.1	232.1	7.1	19.2	38	4.5	0.0	0.00
##	305	6	5	may	sat	85.1	28.0	113.8	3.5	11.3	94	4.9	0.0	0.00
##	306	1	4	sep	sun	89.6	84.1	714.3	5.7	19.0	52	2.2	0.0	0.00
##	307	7	4	sep	sun	89.6	84.1	714.3	5.7	17.1	53	5.4	0.0	0.41
##	308	3	4	sep	sun	89.6	84.1	714.3	5.7	23.8	35	3.6	0.0	5.18
##	309	2	4	sep	sun	92.4	105.8	758.1	9.9	16.0	45	1.8	0.0	0.00
##	310	2	4	sep	sun	92.4	105.8	758.1	9.9	24.9	27	2.2	0.0	0.00
##	311	7	4	sep	sun	92.4	105.8	758.1	9.9	25.3	27	2.7	0.0	0.00
##	312	6	3	sep	sun	92.4	105.8	758.1	9.9	24.8	28	1.8	0.0	14.29
##	313	2	4	sep	sun	50.4	46.2	706.6	0.4	12.2	78	6.3	0.0	0.00
##	314	6	5	sep	wed	92.6	115.4	777.1	8.8	24.3	27	4.9	0.0	0.00
##	315	4	4	sep	wed	92.6	115.4	777.1	8.8	19.7	41	1.8	0.0	1.58
##	316	3	4	sep	wed	91.2	134.7	817.5	7.2	18.5	30	2.7	0.0	0.00



##	317	4	5	sep	thu	92.4	96.2	739.4	8.6	18.6	24	5.8	0.0	0.00
##	318	4	4	sep	thu	92.4	96.2	739.4	8.6	19.2	24	4.9	0.0	3.78
##	319	6	5	sep	thu	92.8	119.0	783.5	7.5	21.6	27	2.2	0.0	0.00
##	320	5	4	sep	thu	92.8	119.0	783.5	7.5	21.6	28	6.3	0.0	4.41
##	321	6	3	sep	thu	92.8	119.0	783.5	7.5	18.9	34	7.2	0.0	34.36
##	322	1	4	sep	thu	92.8	119.0	783.5	7.5	16.8	28	4.0	0.0	7.21
##	323	6	5	sep	thu	92.8	119.0	783.5	7.5	16.8	28	4.0	0.0	1.01
##	324	3	5	sep	thu	90.7	136.9	822.8	6.8	12.9	39	2.7	0.0	2.18
##	325	6	5	sep	thu	88.1	53.3	726.9	5.4	13.7	56	1.8	0.0	4.42
##	326	1	4	sep	sat	92.2	102.3	751.5	8.4	24.2	27	3.1	0.0	0.00
##	327	5	4	sep	sat	92.2	102.3	751.5	8.4	24.1	27	3.1	0.0	0.00
##	328	6	5	sep	sat	92.2	102.3	751.5	8.4	21.2	32	2.2	0.0	0.00
##	329	6	5	sep	sat	92.2	102.3	751.5	8.4	19.7	35	1.8	0.0	0.00
##	330	4	3	sep	sat	92.2	102.3	751.5	8.4	23.5	27	4.0	0.0	3.33
##	331	3	3	sep	sat	92.2	102.3	751.5	8.4	24.2	27	3.1	0.0	6.58
##	332	7	4	sep	sat	91.2	124.4	795.3	8.5	21.5	28	4.5	0.0	15.64
##	333	4	4	sep	sat	91.2	124.4	795.3	8.5	17.1	41	2.2	0.0	11.22
##	334	1	4	sep	mon	92.1	87.7	721.1	9.5	18.1	54	3.1	0.0	2.13
##	335	2	3	sep	mon	91.6	108.4	764.0	6.2	18.0	51	5.4	0.0	0.00
##	336	4	3	sep	mon	91.6	108.4	764.0	6.2	9.8	86	1.8	0.0	0.00
##	337	7	4	sep	mon	91.6	108.4	764.0	6.2	19.3	44	2.2	0.0	0.00
##	338	6	3	sep	mon	91.6	108.4	764.0	6.2	23.0	34	2.2	0.0	56.04
##	339	8	6	sep	mon	91.6	108.4	764.0	6.2	22.7	35	2.2	0.0	7.48
##	340	2	4	sep	mon	91.6	108.4	764.0	6.2	20.4	41	1.8	0.0	1.47
##	341	2	5	sep	mon	91.6	108.4	764.0	6.2	19.3	44	2.2	0.0	3.93
##	342	8	6	sep	mon	91.9	111.7	770.3	6.5	15.7	51	2.2	0.0	0.00
##	343	6	3	sep	mon	91.5	130.1	807.1	7.5	20.6	37	1.8	0.0	0.00
##	344	8	6	sep	mon	91.5	130.1	807.1	7.5	15.9	51	4.5	0.0	2.18
##	345	6	3	sep	mon	91.5	130.1	807.1	7.5	12.2	66	4.9	0.0	6.10
##	346	2	2	sep	mon	91.5	130.1	807.1	7.5	16.8	43	3.1	0.0	5.83
##	347	1	4	sep	mon	91.5	130.1	807.1	7.5	21.3	35	2.2	0.0	28.19
##	348	5	4	sep	fri	92.1	99.0	745.3	9.6	10.1	75	3.6	0.0	0.00
##	349	3	4	sep	fri	92.1	99.0	745.3	9.6	17.4	57	4.5	0.0	0.00
##	350	5	4	sep	fri	92.1	99.0	745.3	9.6	12.8	64	3.6	0.0	1.64
##	351	5	4	sep	fri	92.1	99.0	745.3	9.6	10.1	75	3.6	0.0	3.71
##	352	4	4	sep	fri	92.1	99.0	745.3	9.6	15.4	53	6.3	0.0	7.31
##	353	7	4	sep	fri	92.1	99.0	745.3	9.6	20.6	43	3.6	0.0	2.03
##	354	7	4	sep	fri	92.1	99.0	745.3	9.6	19.8	47	2.7	0.0	1.72
##	355	7	4	sep	fri	92.1	99.0	745.3	9.6	18.7	50	2.2	0.0	5.97
##	356	4	4	sep	fri	92.1	99.0	745.3	9.6	20.8	35	4.9	0.0	13.06
##	357	4	4	sep	fri	92.1	99.0	745.3	9.6	20.8	35	4.9	0.0	1.26
##	358	6	3	sep	fri	92.5	122.0	789.7	10.2	15.9	55	3.6	0.0	0.00
##	359	6	3	sep	fri	92.5	122.0	789.7	10.2	19.7	39	2.7	0.0	0.00
##	360	1	4	sep	fri	92.5	122.0	789.7	10.2	21.1	39	2.2	0.0	8.12
##	361	6	5	sep	fri	92.5	122.0	789.7	10.2	18.4	42	2.2	0.0	1.09
##	362	4	3	sep	fri	92.5	122.0	789.7	10.2	17.3	45	4.0	0.0	3.94
##	363	7	4	sep	fri	88.2	55.2	732.3	11.6	15.2	64	3.1	0.0	0.52
##	364	4	3	sep	tue	91.9	111.7	770.3	6.5	15.9	53	2.2	0.0	2.93
##	365	6	5	sep	tue	91.9	111.7	770.3	6.5	21.1	35	2.7	0.0	5.65
##	366	6	5	sep	tue	91.9	111.7	770.3	6.5	19.6	45	3.1	0.0	20.03
##	367	4	5	sep	tue	91.1	132.3	812.1	12.5	15.9	38	5.4	0.0	1.75
##	368	4	5	sep	tue	91.1	132.3	812.1	12.5	16.4	27	3.6	0.0	0.00
##	369	6	5	sep	sat	91.2	94.3	744.4	8.4	16.8	47	4.9	0.0	12.64
##	370	4	5	sep	sun	91.0	276.3	825.1	7.1	13.8	77	7.6	0.0	0.00

##	371	7	4	sep	sun	91.0	276.3	825.1	7.1	13.8	77	7.6	0.0	11.06
##	372	3	4	jul	wed	91.9	133.6	520.5	8.0	14.2	58	4.0	0.0	0.00
##	373	4	5	aug	sun	92.0	203.2	664.5	8.1	10.4	75	0.9	0.0	0.00
##	374	5	4	aug	thu	94.8	222.4	698.6	13.9	20.3	42	2.7	0.0	0.00
##	375	6	5	sep	fri	90.3	290.0	855.3	7.4	10.3	78	4.0	0.0	18.30
##	376	6	5	sep	sat	91.2	94.3	744.4	8.4	15.4	57	4.9	0.0	39.35
##	377	8	6	aug	mon	92.1	207.0	672.6	8.2	21.1	54	2.2	0.0	0.00
##	378	2	2	aug	sat	93.7	231.1	715.1	8.4	21.9	42	2.2	0.0	174.63
##	379	6	5	mar	thu	90.9	18.9	30.6	8.0	8.7	51	5.8	0.0	0.00
##	380	4	5	jan	sun	18.7	1.1	171.4	0.0	5.2	100	0.9	0.0	0.00
##	381	5	4	jul	wed	93.7	101.3	458.8	11.9	19.3	39	7.2	0.0	7.73
##	382	8	6	aug	thu	90.7	194.1	643.0	6.8	16.2	63	2.7	0.0	16.33
##	383	8	6	aug	wed	95.2	217.7	690.0	18.0	28.2	29	1.8	0.0	5.86
##	384	9	6	aug	thu	91.6	248.4	753.8	6.3	20.5	58	2.7	0.0	42.87
##	385	8	4	aug	sat	91.6	273.8	819.1	7.7	21.3	44	4.5	0.0	12.18
##	386	2	4	aug	sun	91.6	181.3	613.0	7.6	20.9	50	2.2	0.0	16.00
##	387	3	4	sep	sun	90.5	96.7	750.5	11.4	20.6	55	5.4	0.0	24.59
##	388	5	5	mar	thu	90.9	18.9	30.6	8.0	11.6	48	5.4	0.0	0.00
##	389	6	4	aug	fri	94.8	227.0	706.7	12.0	23.3	34	3.1	0.0	28.74
##	390	7	4	aug	fri	94.8	227.0	706.7	12.0	23.3	34	3.1	0.0	0.00
##	391	7	4	feb	mon	84.7	9.5	58.3	4.1	7.5	71	6.3	0.0	9.96
##	392	8	6	sep	fri	91.1	91.3	738.1	7.2	20.7	46	2.7	0.0	30.18
##	393	1	3	sep	sun	91.0	276.3	825.1	7.1	21.9	43	4.0	0.0	70.76
##	394	2	4	mar	tue	93.4	15.0	25.6	11.4	15.2	19	7.6	0.0	0.00
##	395	6	5	feb	mon	84.1	4.6	46.7	2.2	5.3	68	1.8	0.0	0.00
##	396	4	5	feb	sun	85.0	9.0	56.9	3.5	10.1	62	1.8	0.0	51.78
##	397	4	3	sep	sun	90.5	96.7	750.5	11.4	20.4	55	4.9	0.0	3.64
##	398	5	6	aug	sun	91.6	181.3	613.0	7.6	24.3	33	3.6	0.0	3.63
##	399	1	2	aug	sat	93.7	231.1	715.1	8.4	25.9	32	3.1	0.0	0.00
##	400	9	5	jun	wed	93.3	49.5	297.7	14.0	28.0	34	4.5	0.0	0.00
##	401	9	5	jun	wed	93.3	49.5	297.7	14.0	28.0	34	4.5	0.0	8.16
##	402	3	4	sep	thu	91.1	88.2	731.7	8.3	22.8	46	4.0	0.0	4.95
##	403	9	9	aug	fri	94.8	227.0	706.7	12.0	25.0	36	4.0	0.0	0.00
##	404	8	6	aug	thu	90.7	194.1	643.0	6.8	21.3	41	3.6	0.0	0.00
##	405	2	4	sep	wed	87.9	84.8	725.1	3.7	21.8	34	2.2	0.0	6.04
##	406	2	2	aug	tue	94.6	212.1	680.9	9.5	27.9	27	2.2	0.0	0.00
##	407	6	5	sep	sat	87.1	291.3	860.6	4.0	17.0	67	4.9	0.0	3.95
##	408	4	5	feb	sat	84.7	8.2	55.0	2.9	14.2	46	4.0	0.0	0.00
##	409	4	3	sep	fri	90.3	290.0	855.3	7.4	19.9	44	3.1	0.0	7.80
##	410	1	4	jul	tue	92.3	96.2	450.2	12.1	23.4	31	5.4	0.0	0.00
##	411	6	3	feb	fri	84.1	7.3	52.8	2.7	14.7	42	2.7	0.0	0.00
##	412	7	4	feb	fri	84.6	3.2	43.6	3.3	8.2	53	9.4	0.0	4.62
##	413	9	4	jul	mon	92.3	92.1	442.1	9.8	22.8	27	4.5	0.0	1.63
##	414	7	5	aug	sat	93.7	231.1	715.1	8.4	26.4	33	3.6	0.0	0.00
##	415	5	4	aug	sun	93.6	235.1	723.1	10.1	24.1	50	4.0	0.0	0.00
##	416	8	6	aug	thu	94.8	222.4	698.6	13.9	27.5	27	4.9	0.0	746.28
##	417	6	3	jul	tue	92.7	164.1	575.8	8.9	26.3	39	3.1	0.0	7.02
##	418	6	5	mar	wed	93.4	17.3	28.3	9.9	13.8	24	5.8	0.0	0.00
##	419	2	4	aug	sun	92.0	203.2	664.5	8.1	24.9	42	5.4	0.0	2.44
##	420	2	5	aug	sun	91.6	181.3	613.0	7.6	24.8	36	4.0	0.0	3.05
##	421	8	8	aug	wed	91.7	191.4	635.9	7.8	26.2	36	4.5	0.0	185.76
##	422	2	4	aug	wed	95.2	217.7	690.0	18.0	30.8	19	4.5	0.0	0.00
##	423	8	6	jul	sun	88.9	263.1	795.9	5.2	29.3	27	3.6	0.0	6.30
##	424	1	3	sep	sat	91.2	94.3	744.4	8.4	22.3	48	4.0	0.0	0.72

##	425	8	6	aug	sat	93.7	231.1	715.1	8.4	26.9	31	3.6	0.0	4.96
##	426	2	2	aug	thu	91.6	248.4	753.8	6.3	20.4	56	2.2	0.0	0.00
##	427	8	6	aug	thu	91.6	248.4	753.8	6.3	20.4	56	2.2	0.0	0.00
##	428	2	4	aug	mon	92.1	207.0	672.6	8.2	27.9	33	2.2	0.0	2.35
##	429	1	3	aug	thu	94.8	222.4	698.6	13.9	26.2	34	5.8	0.0	0.00
##	430	3	4	aug	sun	91.6	181.3	613.0	7.6	24.6	44	4.0	0.0	3.20
##	431	7	4	sep	thu	89.7	287.2	849.3	6.8	19.4	45	3.6	0.0	0.00
##	432	1	3	aug	sat	92.1	178.0	605.3	9.6	23.3	40	4.0	0.0	6.36
##	433	8	6	aug	thu	94.8	222.4	698.6	13.9	23.9	38	6.7	0.0	0.00
##	434	2	4	aug	sun	93.6	235.1	723.1	10.1	20.9	66	4.9	0.0	15.34
##	435	1	4	aug	fri	90.6	269.8	811.2	5.5	22.2	45	3.6	0.0	0.00
##	436	2	5	jul	sat	90.8	84.7	376.6	5.6	23.8	51	1.8	0.0	0.00
##	437	8	6	aug	mon	92.1	207.0	672.6	8.2	26.8	35	1.3	0.0	0.54
##	438	8	6	aug	sat	89.4	253.6	768.4	9.7	14.2	73	2.7	0.0	0.00
##	439	2	5	aug	sat	93.7	231.1	715.1	8.4	23.6	53	4.0	0.0	6.43
##	440	1	3	sep	fri	91.1	91.3	738.1	7.2	19.1	46	2.2	0.0	0.33
##	441	5	4	sep	fri	90.3	290.0	855.3	7.4	16.2	58	3.6	0.0	0.00
##	442	8	6	aug	mon	92.1	207.0	672.6	8.2	25.5	29	1.8	0.0	1.23
##	443	6	5	apr	mon	87.9	24.9	41.6	3.7	10.9	64	3.1	0.0	3.35
##	444	1	2	jul	fri	90.7	80.9	368.3	16.8	14.8	78	8.0	0.0	0.00
##	445	2	5	sep	fri	90.3	290.0	855.3	7.4	16.2	58	3.6	0.0	9.96
##	446	5	5	aug	sun	94.0	47.9	100.7	10.7	17.3	80	4.5	0.0	0.00
##	447	6	5	aug	sun	92.0	203.2	664.5	8.1	19.1	70	2.2	0.0	0.00
##	448	3	4	mar	wed	93.4	17.3	28.3	9.9	8.9	35	8.0	0.0	0.00
##	449	7	4	sep	wed	89.7	284.9	844.0	10.1	10.5	77	4.0	0.0	0.00
##	450	7	4	aug	sun	91.6	181.3	613.0	7.6	19.3	61	4.9	0.0	0.00
##	451	4	5	aug	wed	95.2	217.7	690.0	18.0	23.4	49	5.4	0.0	6.43
##	452	1	4	aug	fri	90.5	196.8	649.9	16.3	11.8	88	4.9	0.0	9.71
##	453	7	4	aug	mon	91.5	238.2	730.6	7.5	17.7	65	4.0	0.0	0.00
##	454	4	5	aug	thu	89.4	266.2	803.3	5.6	17.4	54	3.1	0.0	0.00
##	455	3	4	aug	thu	91.6	248.4	753.8	6.3	16.8	56	3.1	0.0	0.00
##	456	3	4	jul	mon	94.6	160.0	567.2	16.7	17.9	48	2.7	0.0	0.00
##	457	2	4	aug	thu	91.6	248.4	753.8	6.3	16.6	59	2.7	0.0	0.00
##	458	1	4	aug	wed	91.7	191.4	635.9	7.8	19.9	50	4.0	0.0	82.75
##	459	8	6	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	3.32
##	460	7	4	aug	sat	91.6	273.8	819.1	7.7	15.5	72	8.0	0.0	1.94
##	461	2	5	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	0.00
##	462	8	6	aug	sat	93.7	231.1	715.1	8.4	18.9	64	4.9	0.0	0.00
##	463	1	4	sep	sun	91.0	276.3	825.1	7.1	14.5	76	7.6	0.0	3.71
##	464	6	5	feb	tue	75.1	4.4	16.2	1.9	4.6	82	6.3	0.0	5.39
##	465	6	4	feb	tue	75.1	4.4	16.2	1.9	5.1	77	5.4	0.0	2.14
##	466	2	2	feb	sat	79.5	3.6	15.3	1.8	4.6	59	0.9	0.0	6.84
##	467	6	5	mar	mon	87.2	15.1	36.9	7.1	10.2	45	5.8	0.0	3.18
##	468	3	4	mar	wed	90.2	18.5	41.1	7.3	11.2	41	5.4	0.0	5.55
##	469	6	5	mar	thu	91.3	20.6	43.5	8.5	13.3	27	3.6	0.0	6.61
##	470	6	3	apr	sun	91.0	14.6	25.6	12.3	13.7	33	9.4	0.0	61.13
##	471	5	4	apr	sun	91.0	14.6	25.6	12.3	17.6	27	5.8	0.0	0.00
##	472	4	3	may	fri	89.6	25.4	73.7	5.7	18.0	40	4.0	0.0	38.48
##	473	8	3	jun	mon	88.2	96.2	229.0	4.7	14.3	79	4.0	0.0	1.94
##	474	9	4	jun	sat	90.5	61.1	252.6	9.4	24.5	50	3.1	0.0	70.32
##	475	4	3	jun	thu	93.0	103.8	316.7	10.8	26.4	35	2.7	0.0	10.08
##	476	2	5	jun	thu	93.7	121.7	350.2	18.0	22.7	40	9.4	0.0	3.19
##	477	4	3	jul	thu	93.5	85.3	395.0	9.9	27.2	28	1.3	0.0	1.76
##	478	4	3	jul	sun	93.7	101.3	423.4	14.7	26.1	45	4.0	0.0	7.36

##	479	7	4	jul	sun	93.7	101.3	423.4	14.7	18.2	82	4.5	0.0	2.21
##	480	7	4	jul	mon	89.2	103.9	431.6	6.4	22.6	57	4.9	0.0	278.53
##	481	9	9	jul	thu	93.2	114.4	560.0	9.5	30.2	25	4.5	0.0	2.75
##	482	4	3	jul	thu	93.2	114.4	560.0	9.5	30.2	22	4.9	0.0	0.00
##	483	3	4	aug	sun	94.9	130.3	587.1	14.1	23.4	40	5.8	0.0	1.29
##	484	8	6	aug	sun	94.9	130.3	587.1	14.1	31.0	27	5.4	0.0	0.00
##	485	2	5	aug	sun	94.9	130.3	587.1	14.1	33.1	25	4.0	0.0	26.43
##	486	2	4	aug	mon	95.0	135.5	596.3	21.3	30.6	28	3.6	0.0	2.07
##	487	5	4	aug	tue	95.1	141.3	605.8	17.7	24.1	43	6.3	0.0	2.00
##	488	5	4	aug	tue	95.1	141.3	605.8	17.7	26.4	34	3.6	0.0	16.40
##	489	4	4	aug	tue	95.1	141.3	605.8	17.7	19.4	71	7.6	0.0	46.70
##	490	4	4	aug	wed	95.1	141.3	605.8	17.7	20.6	58	1.3	0.0	0.00
##	491	4	4	aug	wed	95.1	141.3	605.8	17.7	28.7	33	4.0	0.0	0.00
##	492	4	4	aug	thu	95.8	152.0	624.1	13.8	32.4	21	4.5	0.0	0.00
##	493	1	3	aug	fri	95.9	158.0	633.6	11.3	32.4	27	2.2	0.0	0.00
##	494	1	3	aug	fri	95.9	158.0	633.6	11.3	27.5	29	4.5	0.0	43.32
##	495	6	6	aug	sat	96.0	164.0	643.0	14.0	30.8	30	4.9	0.0	8.59
##	496	6	6	aug	mon	96.2	175.5	661.8	16.8	23.9	42	2.2	0.0	0.00
##	497	4	5	aug	mon	96.2	175.5	661.8	16.8	32.6	26	3.1	0.0	2.77
##	498	3	4	aug	tue	96.1	181.1	671.2	14.3	32.3	27	2.2	0.0	14.68
##	499	6	5	aug	tue	96.1	181.1	671.2	14.3	33.3	26	2.7	0.0	40.54
##	500	7	5	aug	tue	96.1	181.1	671.2	14.3	27.3	63	4.9	6.4	10.82
##	501	8	6	aug	tue	96.1	181.1	671.2	14.3	21.6	65	4.9	0.8	0.00
##	502	7	5	aug	tue	96.1	181.1	671.2	14.3	21.6	65	4.9	0.8	0.00
##	503	4	4	aug	tue	96.1	181.1	671.2	14.3	20.7	69	4.9	0.4	0.00
##	504	2	4	aug	wed	94.5	139.4	689.1	20.0	29.2	30	4.9	0.0	1.95
##	505	4	3	aug	wed	94.5	139.4	689.1	20.0	28.9	29	4.9	0.0	49.59
##	506	1	2	aug	thu	91.0	163.2	744.4	10.1	26.7	35	1.8	0.0	5.80
##	507	1	2	aug	fri	91.0	166.9	752.6	7.1	18.5	73	8.5	0.0	0.00
##	508	2	4	aug	fri	91.0	166.9	752.6	7.1	25.9	41	3.6	0.0	0.00
##	509	1	2	aug	fri	91.0	166.9	752.6	7.1	25.9	41	3.6	0.0	0.00
##	510	5	4	aug	fri	91.0	166.9	752.6	7.1	21.1	71	7.6	1.4	2.17
##	511	6	5	aug	fri	91.0	166.9	752.6	7.1	18.2	62	5.4	0.0	0.43
##	512	8	6	aug	sun	81.6	56.7	665.6	1.9	27.8	35	2.7	0.0	0.00
##	513	4	3	aug	sun	81.6	56.7	665.6	1.9	27.8	32	2.7	0.0	6.44
##	514	2	4	aug	sun	81.6	56.7	665.6	1.9	21.9	71	5.8	0.0	54.29
##	515	7	4	aug	sun	81.6	56.7	665.6	1.9	21.2	70	6.7	0.0	11.16
##	516	1	4	aug	sat	94.4	146.0	614.7	11.3	25.6	42	4.0	0.0	0.00
##	517	6	3	nov	tue	79.5	3.0	106.7	1.1	11.8	31	4.5	0.0	0.00
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```

**5. Construct a matrix with 10 columns and 10 rows, filled with random numbers between 0 and 1. Apply two different methods.**

```
q5.1 <- replicate(10, runif(10))
q5.1
```

```
##           [,1]      [,2]      [,3]      [,4]      [,5]      [,6]
## [1,] 0.9662096 0.60482003 0.4046851 0.4346817 0.770429884 0.07255619
## [2,] 0.6625796 0.35985876 0.5665641 0.7487124 0.107613240 0.78646908
## [3,] 0.5324436 0.28449868 0.2841330 0.8364962 0.543626486 0.01410809
## [4,] 0.2170043 0.61453257 0.7219586 0.9958837 0.994728038 0.79750480
## [5,] 0.2041714 0.83347958 0.8334892 0.1698355 0.018987703 0.53937808
## [6,] 0.1520908 0.29429771 0.5089846 0.8554511 0.701413368 0.03303337
## [7,] 0.3771860 0.28419976 0.6910948 0.5329147 0.806250726 0.36021457
## [8,] 0.3817204 0.00703898 0.1754595 0.5293250 0.003397909 0.08361636
## [9,] 0.6892197 0.76420393 0.8317379 0.2362690 0.670443312 0.35539306
## [10,] 0.4886630 0.04097507 0.8450007 0.6790535 0.552354360 0.76755972
##           [,7]      [,8]      [,9]      [,10]
## [1,] 0.4745497 0.07655857 0.2623195 0.52751548
## [2,] 0.7505361 0.15419168 0.0215985 0.36597786
## [3,] 0.7335265 0.89038525 0.8162364 0.32913983
## [4,] 0.6048694 0.58453023 0.5481661 0.96343335
## [5,] 0.8143511 0.17028422 0.2005347 0.94273271
## [6,] 0.9916888 0.66541093 0.4035049 0.11983438
## [7,] 0.0297941 0.54440160 0.6008298 0.02763932
## [8,] 0.9316835 0.56882720 0.5986241 0.35762760
## [9,] 0.2408328 0.55091449 0.5702110 0.68275528
## [10,] 0.0395204 0.89573695 0.6609834 0.92552753
```

```
q5.2 <- matrix(runif(10*10), ncol=10)
q5.2
```

```
##           [,1]      [,2]      [,3]      [,4]      [,5]      [,6]
## [1,] 0.2124591 0.11146622 0.02410599 0.693037749 0.67928315 0.07912275
## [2,] 0.4531486 0.33623270 0.74913241 0.985914037 0.96771368 0.33472684
```

```
## [3,] 0.5496213 0.02062158 0.38480125 0.340150078 0.98615788 0.22455361
## [4,] 0.3204757 0.76414957 0.15530292 0.285026676 0.71191533 0.14381063
## [5,] 0.7949470 0.95512619 0.27210593 0.001863214 0.03243082 0.96640931
## [6,] 0.2826111 0.09516924 0.19528905 0.149670468 0.10771922 0.64274847
## [7,] 0.3398432 0.61891026 0.43070130 0.847513530 0.84015688 0.80718357
## [8,] 0.5251621 0.02400096 0.13932433 0.057936627 0.78581065 0.84328047
## [9,] 0.6156252 0.64239615 0.54512913 0.090793818 0.01762235 0.17385980
## [10,] 0.8661061 0.02154559 0.87247849 0.506846944 0.35916803 0.83175852
##      [,7]      [,8]      [,9]     [,10]
## [1,] 0.5510979 0.2698757 0.8896406 0.6573040
## [2,] 0.8797485 0.4948798 0.6027861 0.9210634
## [3,] 0.2007291 0.2702802 0.2145268 0.1182772
## [4,] 0.6086921 0.5978674 0.1555233 0.4367836
## [5,] 0.1828225 0.6743433 0.2731470 0.2347502
## [6,] 0.3950552 0.1757245 0.1090637 0.3892399
## [7,] 0.4905995 0.1584210 0.2579742 0.6811637
## [8,] 0.3306167 0.3773420 0.3781862 0.4111935
## [9,] 0.9864662 0.7819593 0.9469298 0.9082243
## [10,] 0.1678981 0.7817229 0.7350448 0.4148811
```

a. Calculate the row means of this matrix.

```
q5.a <- rowMeans(q5.2)
q5.a
```

```
## [1] 0.4167393 0.6725346 0.3309719 0.4179547 0.4387945 0.2542291 0.5472467
## [8] 0.3872853 0.5709006 0.5557451
```

b. Remake the above matrix, with 100 columns, and 10 rows. Then calculate the column means.

```
q5.b1 <- matrix(runif(100*10), ncol=100)
q5.b2 <- colMeans(q5.b1)
q5.b2
```

```
## [1] 0.5737567 0.6053092 0.5112576 0.5811451 0.6000153 0.3495901 0.4457002
## [8] 0.3743714 0.4181950 0.3145855 0.4856359 0.6752216 0.5228972 0.4198040
## [15] 0.4177719 0.3826096 0.3570809 0.5284548 0.6943793 0.3327118 0.4847288
## [22] 0.5470113 0.4294141 0.3935046 0.4999349 0.3872194 0.5813276 0.6166609
## [29] 0.5154367 0.5204563 0.5854979 0.4841923 0.4907101 0.6047720 0.4602875
## [36] 0.2574919 0.5908947 0.4732735 0.5943566 0.4758554 0.5442443 0.3937410
## [43] 0.4975628 0.4660373 0.4134169 0.4288470 0.5337962 0.4806637 0.5674665
## [50] 0.7227787 0.3684727 0.5578435 0.4023133 0.4789950 0.5182770 0.4739822
## [57] 0.5609075 0.6262504 0.4798323 0.4369081 0.5921691 0.3730353 0.4202863
## [64] 0.3434911 0.5812869 0.5285261 0.4884686 0.6310111 0.3956625 0.3352182
## [71] 0.4344904 0.4313808 0.4115246 0.4436221 0.5345929 0.6131448 0.5331722
## [78] 0.5494666 0.5290494 0.4924756 0.4877484 0.7389633 0.4246430 0.5844791
## [85] 0.4076872 0.5512162 0.4536369 0.5462803 0.4363155 0.5304418 0.4753791
## [92] 0.3986720 0.5720769 0.4304635 0.6095378 0.4238570 0.6070290 0.5451926
## [99] 0.5488431 0.3699830
```