

# Untitled

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
##  1st Qu.:12.0    1st Qu.: 26.00
##  Median :15.0    Median : 36.00
##  Mean   :15.4    Mean   : 42.98
##  3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.   :120.00
```

## Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.

```
GR_0 <- read.csv("high-school-graduation-rates.csv")
nrow(GR_0)
```

```
## [1] 55
```

```
GR <- na.omit(GR_0)
nrow(GR)
```

```
## [1] 46
```

```
head(GR)
```

```
##           School.Name Year..end.year.of.academic.year.
## 1      Compadre High School                2012
## 2   Corona Del Sol High School                2012
## 3   Marcos De Niza High School                2012
## 4    Mcclintock High School                2012
## 5         Tempe High School                2012
## 6 Grand Total Tempe High Schools            2012
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 1                136                278
```

## 2	515	540
## 3	381	417
## 4	344	380
## 5	249	284
## 6	1625	1899
##	All.Subgroups.Percentage.Graduated American.Indian.or.Alaska.Native.Graduated	
## 1	48.92	0
## 2	95.37	0
## 3	91.37	30
## 4	90.53	14
## 5	87.68	12
## 6	85.57	56
##	American.Indian.or.Alaska.Native.Number.in.Cohort	
## 1	24	
## 2	0	
## 3	43	
## 4	17	
## 5	13	
## 6	97	
##	American.Indian.or.Alaska.Native.Percentage.Graduated Asian.Graduated	
## 1	0	0
## 2	#DIV/0!	47
## 3	69.77	22
## 4	82.35	27
## 5	92.31	0
## 6	57.73	96
##	Asian.Number.in.Cohort Asian.Percentage.Graduated	
## 1	0	#DIV/0!
## 2	48	97.92
## 3	23	95.65
## 4	34	79.41
## 5	11	0
## 6	116	82.76
##	Black.or.African.American.Graduated	
## 1	26	
## 2	37	
## 3	53	
## 4	38	
## 5	47	
## 6	201	
##	Black.or.African.American.Number.in.Cohort	
## 1	53	
## 2	37	
## 3	54	
## 4	42	
## 5	57	
## 6	243	
##	Black.or.African.American.Percentage.Graduated	
## 1	49.06	
## 2	100.00	
## 3	98.15	
## 4	90.48	
## 5	82.46	
## 6	82.72	

##	Economically.Disadvantaged.Graduated		
## 1		47	
## 2		30	
## 3		67	
## 4		110	
## 5		94	
## 6		348	
##	Economically.Disadvantaged.Number.in.Cohort		
## 1		98	
## 2		30	
## 3		86	
## 4		116	
## 5		107	
## 6		437	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated	
## 1		47.96	76
## 2		100	274
## 3		77.91	203
## 4		94.83	172
## 5		87.85	133
## 6		79.63	858
##	Female.Number.in.Cohort	Female.Percentage.Graduated	
## 1	129	58.91	
## 2	283	96.82	
## 3	219	92.69	
## 4	186	92.47	
## 5	148	89.86	
## 6	965	88.91	
##	Hispanic.or.Latino.Graduated	Hispanic.or.Latino.Number.in.Cohort	
## 1	59	123	
## 2	62	63	
## 3	141	151	
## 4	111	121	
## 5	143	157	
## 6	516	615	
##	Hispanic.or.Latino.Percentage.Graduated	Limited.English.Proficient.Graduated	
## 1	47.97	0	
## 2	98.41	0	
## 3	93.38	0	
## 4	91.74	0	
## 5	91.08	0	
## 6	83.90	0	
##	Limited.English.Proficient.Number.in.Cohort		
## 1	0		
## 2	0		
## 3	0		
## 4	0		
## 5	0		
## 6	0		
##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated	
## 1	#DIV/0!	60	
## 2	#DIV/0!	241	
## 3	#DIV/0!	178	
## 4	#DIV/0!	172	

## 5		#DIV/0!	116
## 6		#DIV/0!	767
##	Male.Number.in.Cohort	Male.Percentage.Graduated	Migrant.Graduated
## 1	149	40.27	0
## 2	257	93.77	0
## 3	198	89.90	0
## 4	194	88.66	0
## 5	136	85.29	0
## 6	934	82.12	0
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated	
## 1	0	#DIV/0!	
## 2	0	#DIV/0!	
## 3	0	#DIV/0!	
## 4	0	#DIV/0!	
## 5	0	#DIV/0!	
## 6	0	#DIV/0!	
##	Multiple.Races.Graduated	Multiple.Races.Number.in.Cohort	
## 1	0	0	
## 2	0	0	
## 3	0	0	
## 4	0	0	
## 5	0	0	
## 6	0	0	
##	Multiple.Races.Percentage.Graduated		
## 1		#DIV/0!	
## 2		#DIV/0!	
## 3		#DIV/0!	
## 4		#DIV/0!	
## 5		#DIV/0!	
## 6		#DIV/0!	
##	Native.Hawaiian.or.Pacific.Islander.Graduated		
## 1		0	
## 2		0	
## 3		0	
## 4		0	
## 5		0	
## 6		0	
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 1		0	
## 2		0	
## 3		0	
## 4		0	
## 5		0	
## 6		0	
##	Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 1		#DIV/0!	
## 2		#DIV/0!	
## 3		#DIV/0!	
## 4		#DIV/0!	
## 5		#DIV/0!	
## 6		#DIV/0!	
##	Students.With.Disabilities.Graduated		
## 1		15	
## 2		31	

```
## 3 33
## 4 25
## 5 25
## 6 129
## Students.With.Disabilities.Number.in.Cohort
## 1 29
## 2 38
## 3 44
## 4 37
## 5 39
## 6 187
## Students.With.Disabilities.Percentage.Graduated White.Graduated
## 1 51.72 36
## 2 81.58 362
## 3 75 135
## 4 67.57 153
## 5 64.1 36
## 6 68.98 722
## White.Number.in.Cohort White.Percentage.Graduated
## 1 66 54.55
## 2 384 94.27
## 3 145 93.10
## 4 164 93.29
## 5 45 80.00
## 6 804 89.80
```

```
ncol(GR)
```

```
## [1] 44
```

```
GR_N <- GR[ which(GR$Year..end.year.of.academic.year.=='2012' | GR$Year..end.year.of.academic.year.=='2013'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_N)
```

```
## School.Name Year..end.year.of.academic.year.
## 46 Compadre High School 2017
## 47 Corona Del Sol High School 2017
## 48 Marcos De Niza High School 2017
## 49 Mcclintock High School 2017
## 50 Tempe High School 2017
## 51 Grand Total Tempe High Schools 2017
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 46 55 169
## 47 672 700
## 48 284 333
## 49 370 408
## 50 294 332
## 51 1675 1942
## All.Subgroups.Percentage.Graduated
## 46 32.54
## 47 96.00
## 48 85.29
## 49 90.69
```

##	50	88.55	
##	51	86.25	
##	American.Indian.or.Alaska.Native.Graduated		
##	46	9	
##	47	11	
##	48	25	
##	49	14	
##	50	0	
##	51	59	
##	American.Indian.or.Alaska.Native.Number.in.Cohort		
##	46	22	
##	47	12	
##	48	31	
##	49	16	
##	50	0	
##	51	81	
##	American.Indian.or.Alaska.Native.Percentage.Graduated		Asian.Graduated
##	46	40.91	0
##	47	91.67	64
##	48	80.65	12
##	49	87.5	20
##	50	#DIV/0!	0
##	51	72.84	96
##	Asian.Number.in.Cohort		Asian.Percentage.Graduated
##	46	0	#DIV/0!
##	47	66	96.97
##	48	13	92.31
##	49	21	95.24
##	50	0	#DIV/0!
##	51	100	96
##	Black.or.African.American.Graduated		
##	46	9	
##	47	37	
##	48	26	
##	49	40	
##	50	34	
##	51	146	
##	Black.or.African.American.Number.in.Cohort		
##	46	30	
##	47	40	
##	48	30	
##	49	41	
##	50	38	
##	51	179	
##	Black.or.African.American.Percentage.Graduated		
##	46	30.00	
##	47	92.50	
##	48	86.67	
##	49	97.56	
##	50	89.47	
##	51	81.56	
##	Economically.Disadvantaged.Graduated		
##	46	0	
##	47	0	

## 48	0	
## 49	0	
## 50	0	
## 51	0	
##	Economically.Disadvantaged.Number.in.Cohort	
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
##	Economically.Disadvantaged.Percentage.Graduated Female.Graduated	
## 46	#DIV/0!	32
## 47	#DIV/0!	335
## 48	#DIV/0!	140
## 49	#DIV/0!	186
## 50	#DIV/0!	162
## 51	#DIV/0!	855
##	Female.Number.in.Cohort Female.Percentage.Graduated	
## 46	83	38.55
## 47	345	97.10
## 48	161	86.96
## 49	201	92.54
## 50	172	94.19
## 51	962	88.88
##	Hispanic.or.Latino.Graduated Hispanic.or.Latino.Number.in.Cohort	
## 46	25	90
## 47	132	141
## 48	139	167
## 49	136	156
## 50	216	241
## 51	648	795
##	Hispanic.or.Latino.Percentage.Graduated Limited.English.Proficient.Graduated	
## 46	27.78	0
## 47	93.62	0
## 48	83.23	0
## 49	87.18	0
## 50	89.63	0
## 51	81.51	0
##	Limited.English.Proficient.Number.in.Cohort	
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
##	Limited.English.Proficient.Percentage.Graduated Male.Graduated	
## 46	#DIV/0!	23
## 47	#DIV/0!	337
## 48	#DIV/0!	144
## 49	#DIV/0!	184
## 50	#DIV/0!	132
## 51	#DIV/0!	820
##	Male.Number.in.Cohort Male.Percentage.Graduated Migrant.Graduated	



## 46	86	26.74	0
## 47	355	94.93	0
## 48	172	83.72	0
## 49	207	88.89	0
## 50	160	82.50	0
## 51	890	92.13	0
##	Migrant.Number.in.Cohort Migrant.Percentage.Graduated		
## 46	0	#DIV/0!	
## 47	0	#DIV/0!	
## 48	0	#DIV/0!	
## 49	0	#DIV/0!	
## 50	0	#DIV/0!	
## 51	0	#DIV/0!	
##	Multiple.Races.Graduated Multiple.Races.Number.in.Cohort		
## 46	0	0	
## 47	45	47	
## 48	0	0	
## 49	17	17	
## 50	0	0	
## 51	62	64	
##	Multiple.Races.Percentage.Graduated		
## 46	#DIV/0!		
## 47	95.74		
## 48	#DIV/0!		
## 49	100		
## 50	#DIV/0!		
## 51	96.88		
##	Native.Hawaiian.or.Pacific.Islander.Graduated		
## 46	0		
## 47	0		
## 48	0		
## 49	0		
## 50	0		
## 51	0		
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 46	0		
## 47	0		
## 48	0		
## 49	0		
## 50	0		
## 51	0		
##	Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 46	#DIV/0!		
## 47	#DIV/0!		
## 48	#DIV/0!		
## 49	#DIV/0!		
## 50	#DIV/0!		
## 51	#DIV/0!		
##	Students.With.Disabilities.Graduated		
## 46	0		
## 47	27		
## 48	16		
## 49	18		
## 50	24		

```

## 51                                85
## Students.With.Disabilities.Number.in.Cohort
## 46                                0
## 47                                30
## 48                                30
## 49                                25
## 50                                37
## 51                                122
## Students.With.Disabilities.Percentage.Graduated White.Graduated
## 46                                #DIV/0!            8
## 47                                90            379
## 48                                53.33            70
## 49                                72            141
## 50                                64.86            28
## 51                                69.67            626
## White.Number.in.Cohort White.Percentage.Graduated
## 46                                18            44.44
## 47                                390            97.18
## 48                                79            88.61
## 49                                155            90.97
## 50                                34            82.35
## 51                                676            92.60

```

```
head(GR_N)
```

```

## School.Name Year..end.year.of.academic.year.
## 1 Compadre High School 2012
## 2 Corona Del Sol High School 2012
## 3 Marcos De Niza High School 2012
## 4 Mcclintock High School 2012
## 5 Tempe High School 2012
## 6 Grand Total Tempe High Schools 2012
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 1 136 278
## 2 515 540
## 3 381 417
## 4 344 380
## 5 249 284
## 6 1625 1899
## All.Subgroups.Percentage.Graduated American.Indian.or.Alaska.Native.Graduated
## 1 48.92 0
## 2 95.37 0
## 3 91.37 30
## 4 90.53 14
## 5 87.68 12
## 6 85.57 56
## American.Indian.or.Alaska.Native.Number.in.Cohort
## 1 24
## 2 0
## 3 43
## 4 17
## 5 13
## 6 97
## American.Indian.or.Alaska.Native.Percentage.Graduated Asian.Graduated

```

## 1		0	0
## 2		#DIV/0!	47
## 3		69.77	22
## 4		82.35	27
## 5		92.31	0
## 6		57.73	96
##	Asian.Number.in.Cohort	Asian.Percentage.Graduated	
## 1	0	#DIV/0!	
## 2	48	97.92	
## 3	23	95.65	
## 4	34	79.41	
## 5	11	0	
## 6	116	82.76	
##	Black.or.African.American.Graduated		
## 1		26	
## 2		37	
## 3		53	
## 4		38	
## 5		47	
## 6		201	
##	Black.or.African.American.Number.in.Cohort		
## 1		53	
## 2		37	
## 3		54	
## 4		42	
## 5		57	
## 6		243	
##	Black.or.African.American.Percentage.Graduated		
## 1		49.06	
## 2		100.00	
## 3		98.15	
## 4		90.48	
## 5		82.46	
## 6		82.72	
##	Economically.Disadvantaged.Graduated		
## 1		47	
## 2		30	
## 3		67	
## 4		110	
## 5		94	
## 6		348	
##	Economically.Disadvantaged.Number.in.Cohort		
## 1		98	
## 2		30	
## 3		86	
## 4		116	
## 5		107	
## 6		437	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated	
## 1		47.96	76
## 2		100	274
## 3		77.91	203
## 4		94.83	172
## 5		87.85	133

## 6		79.63	858
##	Female.Number.in.Cohort Female.Percentage.Graduated		
## 1	129	58.91	
## 2	283	96.82	
## 3	219	92.69	
## 4	186	92.47	
## 5	148	89.86	
## 6	965	88.91	
##	Hispanic.or.Latino.Graduated Hispanic.or.Latino.Number.in.Cohort		
## 1	59		123
## 2	62		63
## 3	141		151
## 4	111		121
## 5	143		157
## 6	516		615
##	Hispanic.or.Latino.Percentage.Graduated Limited.English.Proficient.Graduated		
## 1	47.97		0
## 2	98.41		0
## 3	93.38		0
## 4	91.74		0
## 5	91.08		0
## 6	83.90		0
##	Limited.English.Proficient.Number.in.Cohort		
## 1	0		
## 2	0		
## 3	0		
## 4	0		
## 5	0		
## 6	0		
##	Limited.English.Proficient.Percentage.Graduated Male.Graduated		
## 1	#DIV/0!		60
## 2	#DIV/0!		241
## 3	#DIV/0!		178
## 4	#DIV/0!		172
## 5	#DIV/0!		116
## 6	#DIV/0!		767
##	Male.Number.in.Cohort Male.Percentage.Graduated Migrant.Graduated		
## 1	149	40.27	0
## 2	257	93.77	0
## 3	198	89.90	0
## 4	194	88.66	0
## 5	136	85.29	0
## 6	934	82.12	0
##	Migrant.Number.in.Cohort Migrant.Percentage.Graduated		
## 1	0	#DIV/0!	
## 2	0	#DIV/0!	
## 3	0	#DIV/0!	
## 4	0	#DIV/0!	
## 5	0	#DIV/0!	
## 6	0	#DIV/0!	
##	Multiple.Races.Graduated Multiple.Races.Number.in.Cohort		
## 1	0		0
## 2	0		0
## 3	0		0

## 4	0	0
## 5	0	0
## 6	0	0
## Multiple.Races.Percentage.Graduated		
## 1	#DIV/0!	
## 2	#DIV/0!	
## 3	#DIV/0!	
## 4	#DIV/0!	
## 5	#DIV/0!	
## 6	#DIV/0!	
## Native.Hawaiian.or.Pacific.Islander.Graduated		
## 1	0	
## 2	0	
## 3	0	
## 4	0	
## 5	0	
## 6	0	
## Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 1	0	
## 2	0	
## 3	0	
## 4	0	
## 5	0	
## 6	0	
## Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 1	#DIV/0!	
## 2	#DIV/0!	
## 3	#DIV/0!	
## 4	#DIV/0!	
## 5	#DIV/0!	
## 6	#DIV/0!	
## Students.With.Disabilities.Graduated		
## 1	15	
## 2	31	
## 3	33	
## 4	25	
## 5	25	
## 6	129	
## Students.With.Disabilities.Number.in.Cohort		
## 1	29	
## 2	38	
## 3	44	
## 4	37	
## 5	39	
## 6	187	
## Students.With.Disabilities.Percentage.Graduated White.Graduated		
## 1	51.72	36
## 2	81.58	362
## 3	75	135
## 4	67.57	153
## 5	64.1	36
## 6	68.98	722
## White.Number.in.Cohort White.Percentage.Graduated		
## 1	66	54.55

```
## 2          384          94.27
## 3          145          93.10
## 4          164          93.29
## 5           45          80.00
## 6          804          89.80
```

```
# Divide the original data frame into a new data frame by year
```

```
GR_2012 <- GR[ which(GR$Year..end.year.of.academic.year=='2012'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2012)
```

```
##          School.Name Year..end.year.of.academic.year.
## 1      Compadre High School                2012
## 2      Corona Del Sol High School            2012
## 3      Marcos De Niza High School            2012
## 4      Mcclintock High School                2012
## 5          Tempe High School                2012
## 6 Grand Total Tempe High Schools            2012
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 1          136          278
## 2          515          540
## 3          381          417
## 4          344          380
## 5          249          284
## 6         1625         1899
## All.Subgroups.Percentage.Graduated American.Indian.or.Alaska.Native.Graduated
## 1          48.92          0
## 2          95.37          0
## 3          91.37         30
## 4          90.53         14
## 5          87.68         12
## 6          85.57         56
## American.Indian.or.Alaska.Native.Number.in.Cohort
## 1          24
## 2           0
## 3          43
## 4          17
## 5          13
## 6          97
## American.Indian.or.Alaska.Native.Percentage.Graduated Asian.Graduated
## 1           0          0
## 2      #DIV/0!         47
## 3         69.77         22
## 4         82.35         27
## 5         92.31          0
## 6         57.73         96
## Asian.Number.in.Cohort Asian.Percentage.Graduated
## 1           0      #DIV/0!
## 2          48         97.92
## 3          23         95.65
## 4          34         79.41
## 5          11          0
## 6         116         82.76
```

##	Black.or.African.American.Graduated		
##	1	26	
##	2	37	
##	3	53	
##	4	38	
##	5	47	
##	6	201	
##	Black.or.African.American.Number.in.Cohort		
##	1	53	
##	2	37	
##	3	54	
##	4	42	
##	5	57	
##	6	243	
##	Black.or.African.American.Percentage.Graduated		
##	1	49.06	
##	2	100.00	
##	3	98.15	
##	4	90.48	
##	5	82.46	
##	6	82.72	
##	Economically.Disadvantaged.Graduated		
##	1	47	
##	2	30	
##	3	67	
##	4	110	
##	5	94	
##	6	348	
##	Economically.Disadvantaged.Number.in.Cohort		
##	1	98	
##	2	30	
##	3	86	
##	4	116	
##	5	107	
##	6	437	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated	
##	1	47.96	76
##	2	100	274
##	3	77.91	203
##	4	94.83	172
##	5	87.85	133
##	6	79.63	858
##	Female.Number.in.Cohort	Female.Percentage.Graduated	
##	1	129	58.91
##	2	283	96.82
##	3	219	92.69
##	4	186	92.47
##	5	148	89.86
##	6	965	88.91
##	Hispanic.or.Latino.Graduated	Hispanic.or.Latino.Number.in.Cohort	
##	1	59	123
##	2	62	63
##	3	141	151
##	4	111	121

## 5	143	157
## 6	516	615
##	Hispanic.or.Latino.Percentage.Graduated	Limited.English.Proficient.Graduated
## 1	47.97	0
## 2	98.41	0
## 3	93.38	0
## 4	91.74	0
## 5	91.08	0
## 6	83.90	0
##	Limited.English.Proficient.Number.in.Cohort	
## 1	0	
## 2	0	
## 3	0	
## 4	0	
## 5	0	
## 6	0	
##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated
## 1	#DIV/0!	60
## 2	#DIV/0!	241
## 3	#DIV/0!	178
## 4	#DIV/0!	172
## 5	#DIV/0!	116
## 6	#DIV/0!	767
##	Male.Number.in.Cohort	Male.Percentage.Graduated
## 1	149	40.27
## 2	257	93.77
## 3	198	89.90
## 4	194	88.66
## 5	136	85.29
## 6	934	82.12
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated
## 1	0	#DIV/0!
## 2	0	#DIV/0!
## 3	0	#DIV/0!
## 4	0	#DIV/0!
## 5	0	#DIV/0!
## 6	0	#DIV/0!
##	Multiple.Races.Graduated	Multiple.Races.Number.in.Cohort
## 1	0	0
## 2	0	0
## 3	0	0
## 4	0	0
## 5	0	0
## 6	0	0
##	Multiple.Races.Percentage.Graduated	
## 1	#DIV/0!	
## 2	#DIV/0!	
## 3	#DIV/0!	
## 4	#DIV/0!	
## 5	#DIV/0!	
## 6	#DIV/0!	
##	Native.Hawaiian.or.Pacific.Islander.Graduated	
## 1	0	
## 2	0	



## 3	0
## 4	0
## 5	0
## 6	0
## Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort	
## 1	0
## 2	0
## 3	0
## 4	0
## 5	0
## 6	0
## Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated	
## 1	#DIV/0!
## 2	#DIV/0!
## 3	#DIV/0!
## 4	#DIV/0!
## 5	#DIV/0!
## 6	#DIV/0!
## Students.With.Disabilities.Graduated	
## 1	15
## 2	31
## 3	33
## 4	25
## 5	25
## 6	129
## Students.With.Disabilities.Number.in.Cohort	
## 1	29
## 2	38
## 3	44
## 4	37
## 5	39
## 6	187
## Students.With.Disabilities.Percentage.Graduated White.Graduated	
## 1	51.72 36
## 2	81.58 362
## 3	75 135
## 4	67.57 153
## 5	64.1 36
## 6	68.98 722
## White.Number.in.Cohort White.Percentage.Graduated	
## 1	66 54.55
## 2	384 94.27
## 3	145 93.10
## 4	164 93.29
## 5	45 80.00
## 6	804 89.80

```
GR_2013 <- GR[ which(GR$Year..end.year.of.academic.year=='2013'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2013)
```

##	School.Name	Year..end.year.of.academic.year.
## 10	Compadre High School	2013
## 11	Corona Del Sol High School	2013

## 12	Marcos De Niza High School	2013
## 13	Mcclintock High School	2013
## 14	Tempe High School	2013
## 15	Grand Total Tempe High Schools	2013
##	All.Subgroups.Graduated All.Subgroups.Number.in.Cohort	
## 10	115	305
## 11	545	578
## 12	386	440
## 13	347	410
## 14	239	283
## 15	1632	2016
##	All.Subgroups.Percentage.Graduated	
## 10	37.70	
## 11	94.29	
## 12	87.73	
## 13	84.63	
## 14	84.45	
## 15	80.95	
##	American.Indian.or.Alaska.Native.Graduated	
## 10	6	
## 11	11	
## 12	30	
## 13	16	
## 14	10	
## 15	73	
##	American.Indian.or.Alaska.Native.Number.in.Cohort	
## 10	28	
## 11	12	
## 12	39	
## 13	21	
## 14	11	
## 15	111	
##	American.Indian.or.Alaska.Native.Percentage.Graduated Asian.Graduated	
## 10	21.43	0
## 11	91.67	60
## 12	76.92	17
## 13	76.19	31
## 14	90.91	10
## 15	65.77	118
##	Asian.Number.in.Cohort Asian.Percentage.Graduated	
## 10	0	#DIV/0!
## 11	63	95.24
## 12	17	100
## 13	33	93.94
## 14	11	90.91
## 15	124	95.16
##	Black.or.African.American.Graduated	
## 10	33	
## 11	28	
## 12	56	
## 13	33	
## 14	43	
## 15	193	
##	Black.or.African.American.Number.in.Cohort	

## 10	73	
## 11	34	
## 12	68	
## 13	41	
## 14	51	
## 15	267	
##	Black.or.African.American.Percentage.Graduated	
## 10	45.21	
## 11	82.35	
## 12	82.35	
## 13	80.49	
## 14	84.31	
## 15	72.28	
##	Economically.Disadvantaged.Graduated	
## 10	52	
## 11	35	
## 12	99	
## 13	36	
## 14	114	
## 15	336	
##	Economically.Disadvantaged.Number.in.Cohort	
## 10	144	
## 11	39	
## 12	124	
## 13	45	
## 14	134	
## 15	486	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated
## 10	36.11	67
## 11	89.74	264
## 12	79.84	190
## 13	80	171
## 14	85.07	139
## 15	69.14	831
##	Female.Number.in.Cohort	Female.Percentage.Graduated
## 10	140	47.86
## 11	275	96.00
## 12	206	92.23
## 13	197	86.80
## 14	155	89.68
## 15	973	85.41
##	Hispanic.or.Latino.Graduated	Hispanic.or.Latino.Number.in.Cohort
## 10	49	128
## 11	74	83
## 12	141	157
## 13	112	131
## 14	150	171
## 15	526	670
##	Hispanic.or.Latino.Percentage.Graduated	Limited.English.Proficient.Graduated
## 10	38.28	0
## 11	89.16	0
## 12	89.81	0
## 13	85.50	0
## 14	87.72	0

## 15	78.51	0
##	Limited.English.Proficient.Number.in.Cohort	
## 10	0	
## 11	0	
## 12	0	
## 13	0	
## 14	0	
## 15	0	
##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated
## 10	#DIV/0!	48
## 11	#DIV/0!	281
## 12	#DIV/0!	196
## 13	#DIV/0!	176
## 14	#DIV/0!	100
## 15	#DIV/0!	801
##	Male.Number.in.Cohort	Male.Percentage.Graduated
## 10	165	29.09
## 11	303	92.74
## 12	234	83.76
## 13	213	82.63
## 14	128	78.13
## 15	1043	76.80
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated
## 10	0	#DIV/0!
## 11	0	#DIV/0!
## 12	0	#DIV/0!
## 13	0	#DIV/0!
## 14	0	#DIV/0!
## 15	0	#DIV/0!
##	Multiple.Races.Graduated	Multiple.Races.Number.in.Cohort
## 10	0	0
## 11	0	0
## 12	0	0
## 13	0	0
## 14	0	0
## 15	0	0
##	Multiple.Races.Percentage.Graduated	
## 10	#DIV/0!	
## 11	#DIV/0!	
## 12	#DIV/0!	
## 13	#DIV/0!	
## 14	#DIV/0!	
## 15	#DIV/0!	
##	Native.Hawaiian.or.Pacific.Islander.Graduated	
## 10	0	
## 11	0	
## 12	0	
## 13	0	
## 14	0	
## 15	0	
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort	
## 10	0	
## 11	0	
## 12	0	

```

## 13 0
## 14 0
## 15 0
## Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated
## 10 #DIV/0!
## 11 #DIV/0!
## 12 #DIV/0!
## 13 #DIV/0!
## 14 #DIV/0!
## 15 #DIV/0!
## Students.With.Disabilities.Graduated
## 10 9
## 11 33
## 12 22
## 13 14
## 14 25
## 15 0
## Students.With.Disabilities.Number.in.Cohort
## 10 26
## 11 46
## 12 42
## 13 25
## 14 34
## 15 0
## Students.With.Disabilities.Percentage.Graduated White.Graduated
## 10 34.62 26
## 11 71.74 370
## 12 52.38 140
## 13 56 150
## 14 73.53 25
## 15 #DIV/0! 711
## White.Number.in.Cohort White.Percentage.Graduated
## 10 69 37.68
## 11 384 96.35
## 12 157 89.17
## 13 178 84.27
## 14 37 67.57
## 15 825 86.18

```

```

GR_2014 <- GR[ which(GR$Year..end.year.of.academic.year=='2014'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2014)

```

```

## School.Name Year..end.year.of.academic.year.
## 19 Compadre High School 2014
## 20 Corona Del Sol High School 2014
## 21 Marcos De Niza High School 2014
## 22 Mcclintock High School 2014
## 23 Tempe High School 2014
## 24 Grand Total Tempe High Schools 2014
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 19 128 390
## 20 430 658
## 21 373 441

```

## 22	333	426
## 23	274	326
## 24	1538	2241
##	All.Subgroups.Percentage.Graduated	
## 19	32.82	
## 20	65.35	
## 21	84.58	
## 22	78.17	
## 23	84.05	
## 24	68.63	
##	American.Indian.or.Alaska.Native.Graduated	
## 19	3	
## 20	7	
## 21	42	
## 22	16	
## 23	0	
## 24	68	
##	American.Indian.or.Alaska.Native.Number.in.Cohort	
## 19	30	
## 20	20	
## 21	51	
## 22	24	
## 23	0	
## 24	125	
##	American.Indian.or.Alaska.Native.Percentage.Graduated	Asian.Graduated
## 19	10	0
## 20	35	48
## 21	82.35	10
## 22	66.67	27
## 23	#DIV/0!	0
## 24	54.4	85
##	Asian.Number.in.Cohort	Asian.Percentage.Graduated
## 19	0	#DIV/0!
## 20	68	70.59
## 21	11	90.91
## 22	31	87.1
## 23	0	#DIV/0!
## 24	110	77.27
##	Black.or.African.American.Graduated	
## 19	29	
## 20	23	
## 21	52	
## 22	31	
## 23	31	
## 24	166	
##	Black.or.African.American.Number.in.Cohort	
## 19	70	
## 20	33	
## 21	59	
## 22	48	
## 23	41	
## 24	251	
##	Black.or.African.American.Percentage.Graduated	
## 19	41.43	

##	20	69.70	
##	21	88.14	
##	22	64.58	
##	23	75.61	
##	24	66.14	
##	Economically.Disadvantaged.Graduated		
##	19	1	
##	20	0	
##	21	0	
##	22	0	
##	23	0	
##	24	1	
##	Economically.Disadvantaged.Number.in.Cohort		
##	19	26	
##	20	0	
##	21	0	
##	22	0	
##	23	0	
##	24	26	
##	Economically.Disadvantaged.Percentage.Graduated Female.Graduated		
##	19	3.85	60
##	20	#DIV/0!	203
##	21	#DIV/0!	209
##	22	#DIV/0!	194
##	23	#DIV/0!	156
##	24	3.85	822
##	Female.Number.in.Cohort Female.Percentage.Graduated		
##	19	165	36.36
##	20	312	65.06
##	21	234	89.32
##	22	235	82.55
##	23	172	90.70
##	24	1118	73.52
##	Hispanic.or.Latino.Graduated Hispanic.or.Latino.Number.in.Cohort		
##	19	55	179
##	20	55	101
##	21	135	174
##	22	127	162
##	23	184	213
##	24	556	829
##	Hispanic.or.Latino.Percentage.Graduated Limited.English.Proficient.Graduated		
##	19	30.73	0
##	20	54.46	0
##	21	77.59	0
##	22	78.40	0
##	23	86.38	0
##	24	67.07	0
##	Limited.English.Proficient.Number.in.Cohort		
##	19	0	
##	20	0	
##	21	0	
##	22	0	
##	23	0	
##	24	0	

##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated	
## 19	#DIV/0!	68	
## 20	#DIV/0!	227	
## 21	#DIV/0!	164	
## 22	#DIV/0!	139	
## 23	#DIV/0!	118	
## 24	#DIV/0!	716	
##	Male.Number.in.Cohort	Male.Percentage.Graduated	Migrant.Graduated
## 19	225	30.22	0
## 20	346	65.61	0
## 21	207	79.23	0
## 22	191	72.77	0
## 23	154	76.62	0
## 24	1123	63.76	0
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated	
## 19	0	#DIV/0!	
## 20	0	#DIV/0!	
## 21	0	#DIV/0!	
## 22	0	#DIV/0!	
## 23	0	#DIV/0!	
## 24	0	#DIV/0!	
##	Multiple.Races.Graduated	Multiple.Races.Number.in.Cohort	
## 19	0	0	
## 20	0	0	
## 21	0	0	
## 22	0	0	
## 23	0	0	
## 24	0	0	
##	Multiple.Races.Percentage.Graduated		
## 19	#DIV/0!		
## 20	#DIV/0!		
## 21	#DIV/0!		
## 22	#DIV/0!		
## 23	#DIV/0!		
## 24	#DIV/0!		
##	Native.Hawaiian.or.Pacific.Islander.Graduated		
## 19	0		
## 20	0		
## 21	0		
## 22	0		
## 23	0		
## 24	0		
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 19	0		
## 20	0		
## 21	0		
## 22	0		
## 23	0		
## 24	0		
##	Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 19	#DIV/0!		
## 20	#DIV/0!		
## 21	#DIV/0!		
## 22	#DIV/0!		



```
## 23                                     #DIV/0!
## 24                                     #DIV/0!
## Students.With.Disabilities.Graduated
## 19                                     7
## 20                                     4
## 21                                     30
## 22                                     10
## 23                                     18
## 24                                     69
## Students.With.Disabilities.Number.in.Cohort
## 19                                     26
## 20                                     26
## 21                                     51
## 22                                     29
## 23                                     39
## 24                                     171
## Students.With.Disabilities.Percentage.Graduated White.Graduated
## 19                                     26.92                                     37
## 20                                     15.38                                     291
## 21                                     58.82                                     128
## 22                                     34.48                                     129
## 23                                     46.15                                     36
## 24                                     40.35                                     621
## White.Number.in.Cohort White.Percentage.Graduated
## 19                                     99                                     37.37
## 20                                     425                                    68.47
## 21                                     140                                    91.43
## 22                                     156                                    82.69
## 23                                     43                                     83.72
## 24                                     863                                    71.96
```

```
GR_2015 <- GR[ which(GR$Year..end.year.of.academic.year=='2015'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2015)
```

```
## School.Name Year..end.year.of.academic.year.
## 28 Compadre High School 2015
## 29 Corona Del Sol High School 2015
## 30 Marcos De Niza High School 2015
## 31 Mcclintock High School 2015
## 32 Tempe High School 2015
## 33 Grand Total Tempe High Schools 2015
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 28 91 273
## 29 582 617
## 30 310 357
## 31 358 408
## 32 275 322
## 33 1616 1977
## All.Subgroups.Percentage.Graduated
## 28 33.33
## 29 94.33
## 30 86.83
## 31 87.75
```

##	32	85.40	
##	33	81.74	
##	American.Indian.or.Alaska.Native.Graduated		
##	28	6	
##	29	0	
##	30	29	
##	31	19	
##	32	11	
##	33	65	
##	American.Indian.or.Alaska.Native.Number.in.Cohort		
##	28	21	
##	29	0	
##	30	34	
##	31	19	
##	32	15	
##	33	89	
##	American.Indian.or.Alaska.Native.Percentage.Graduated Asian.Graduated		
##	28	28.57	0
##	29	#DIV/0!	52
##	30	85.29	0
##	31	100	18
##	32	73.33	10
##	33	73.03	80
##	Asian.Number.in.Cohort Asian.Percentage.Graduated		
##	28	0	#DIV/0!
##	29	53	98.11
##	30	0	#DIV/0!
##	31	20	90
##	32	12	83.33
##	33	85	94.12
##	Black.or.African.American.Graduated		
##	28	15	
##	29	22	
##	30	33	
##	31	17	
##	32	36	
##	33	123	
##	Black.or.African.American.Number.in.Cohort		
##	28	36	
##	29	27	
##	30	38	
##	31	22	
##	32	44	
##	33	167	
##	Black.or.African.American.Percentage.Graduated		
##	28	41.67	
##	29	81.48	
##	30	86.84	
##	31	77.27	
##	32	81.82	
##	33	73.65	
##	Economically.Disadvantaged.Graduated		
##	28	0	
##	29	0	

## 30	0	
## 31	0	
## 32	0	
## 33	0	
##	Economically.Disadvantaged.Number.in.Cohort	
## 28	13	
## 29	0	
## 30	0	
## 31	0	
## 32	0	
## 33	13	
##	Economically.Disadvantaged.Percentage.Graduated Female.Graduated	
## 28	0	46
## 29	#DIV/0!	295
## 30	#DIV/0!	151
## 31	#DIV/0!	186
## 32	#DIV/0!	141
## 33	0	819
##	Female.Number.in.Cohort Female.Percentage.Graduated	
## 28	110	41.82
## 29	307	96.09
## 30	170	88.82
## 31	212	87.74
## 32	161	87.58
## 33	960	85.31
##	Hispanic.or.Latino.Graduated Hispanic.or.Latino.Number.in.Cohort	
## 28	38	133
## 29	101	109
## 30	130	148
## 31	123	148
## 32	168	191
## 33	560	729
##	Hispanic.or.Latino.Percentage.Graduated Limited.English.Proficient.Graduated	
## 28	28.57	0
## 29	92.66	0
## 30	87.84	0
## 31	83.11	0
## 32	87.96	0
## 33	76.82	0
##	Limited.English.Proficient.Number.in.Cohort	
## 28	0	
## 29	0	
## 30	0	
## 31	0	
## 32	0	
## 33	0	
##	Limited.English.Proficient.Percentage.Graduated Male.Graduated	
## 28	#DIV/0!	45
## 29	#DIV/0!	287
## 30	#DIV/0!	159
## 31	#DIV/0!	172
## 32	#DIV/0!	134
## 33	#DIV/0!	797
##	Male.Number.in.Cohort Male.Percentage.Graduated Migrant.Graduated	

## 28	163	27.61	0
## 29	310	92.58	0
## 30	187	85.03	0
## 31	196	87.76	0
## 32	161	83.23	0
## 33	1017	78.37	0
##	Migrant.Number.in.Cohort Migrant.Percentage.Graduated		
## 28	0	#DIV/0!	
## 29	0	#DIV/0!	
## 30	0	#DIV/0!	
## 31	0	#DIV/0!	
## 32	0	#DIV/0!	
## 33	0	#DIV/0!	
##	Multiple.Races.Graduated Multiple.Races.Number.in.Cohort		
## 28	7	21	
## 29	23	24	
## 30	0	0	
## 31	12	18	
## 32	0	0	
## 33	42	63	
##	Multiple.Races.Percentage.Graduated		
## 28	33.33		
## 29	95.83		
## 30	#DIV/0!		
## 31	66.67		
## 32	#DIV/0!		
## 33	66.67		
##	Native.Hawaiian.or.Pacific.Islander.Graduated		
## 28	0		
## 29	0		
## 30	0		
## 31	0		
## 32	0		
## 33	0		
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 28	0		
## 29	0		
## 30	0		
## 31	0		
## 32	0		
## 33	0		
##	Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 28	#DIV/0!		
## 29	#DIV/0!		
## 30	#DIV/0!		
## 31	#DIV/0!		
## 32	#DIV/0!		
## 33	#DIV/0!		
##	Students.With.Disabilities.Graduated		
## 28	6		
## 29	34		
## 30	27		
## 31	17		
## 32	26		

```
## 33 110
## Students.With.Disabilities.Number.in.Cohort
## 28 18
## 29 50
## 30 39
## 31 30
## 32 39
## 33 176
## Students.With.Disabilities.Percentage.Graduated White.Graduated
## 28 33.33 24
## 29 68 372
## 30 69.23 102
## 31 56.67 168
## 32 66.67 37
## 33 62.5 703
## White.Number.in.Cohort White.Percentage.Graduated
## 28 61 39.34
## 29 392 94.90
## 30 120 85.00
## 31 180 93.33
## 32 45 82.22
## 33 798 88.10
```

```
GR_2016 <- GR[ which(GR$Year..end.year.of.academic.year=='2016'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2016)
```

```
## School.Name Year..end.year.of.academic.year.
## 37 Compadre High School 2016
## 38 Corona Del Sol High School 2016
## 39 Marcos De Niza High School 2016
## 40 Mcclintock High School 2016
## 41 Tempe High School 2016
## 42 Grand Total Tempe High Schools 2016
## All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 37 58 209
## 38 646 677
## 39 317 356
## 40 332 368
## 41 270 322
## 42 1623 1932
## All.Subgroups.Percentage.Graduated
## 37 27.75
## 38 95.42
## 39 89.04
## 40 90.22
## 41 83.85
## 42 84.01
## American.Indian.or.Alaska.Native.Graduated
## 37 6
## 38 11
## 39 22
## 40 17
## 41 7
```

## 42	63	
##	American.Indian.or.Alaska.Native.Number.in.Cohort	
## 37	22	
## 38	13	
## 39	26	
## 40	18	
## 41	11	
## 42	90	
##	American.Indian.or.Alaska.Native.Percentage.Graduated	Asian.Graduated
## 37	27.27	0
## 38	84.62	63
## 39	84.62	0
## 40	94.44	19
## 41	63.64	0
## 42	70	82
##	Asian.Number.in.Cohort	Asian.Percentage.Graduated
## 37	0	#DIV/0!
## 38	65	96.92
## 39	0	#DIV/0!
## 40	20	95
## 41	0	#DIV/0!
## 42	85	96.47
##	Black.or.African.American.Graduated	
## 37	12	
## 38	29	
## 39	30	
## 40	41	
## 41	28	
## 42	140	
##	Black.or.African.American.Number.in.Cohort	
## 37	44	
## 38	33	
## 39	33	
## 40	45	
## 41	36	
## 42	191	
##	Black.or.African.American.Percentage.Graduated	
## 37	27.27	
## 38	87.88	
## 39	90.91	
## 40	91.11	
## 41	77.78	
## 42	73.30	
##	Economically.Disadvantaged.Graduated	
## 37	0	
## 38	0	
## 39	0	
## 40	0	
## 41	0	
## 42	0	
##	Economically.Disadvantaged.Number.in.Cohort	
## 37	0	
## 38	0	
## 39	0	

## 40	0	
## 41	0	
## 42	0	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated
## 37	#DIV/0!	29
## 38	#DIV/0!	331
## 39	#DIV/0!	145
## 40	#DIV/0!	185
## 41	#DIV/0!	155
## 42	#DIV/0!	845
##	Female.Number.in.Cohort	Female.Percentage.Graduated
## 37	87	33.33
## 38	343	96.50
## 39	163	88.96
## 40	199	92.96
## 41	171	90.64
## 42	963	87.75
##	Hispanic.or.Latino.Graduated	Hispanic.or.Latino.Number.in.Cohort
## 37	24	89
## 38	114	123
## 39	143	165
## 40	129	139
## 41	186	221
## 42	596	737
##	Hispanic.or.Latino.Percentage.Graduated	Limited.English.Proficient.Graduated
## 37	26.97	0
## 38	92.68	0
## 39	86.67	0
## 40	92.81	0
## 41	84.16	0
## 42	80.87	0
##	Limited.English.Proficient.Number.in.Cohort	
## 37	0	
## 38	0	
## 39	0	
## 40	0	
## 41	0	
## 42	0	
##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated
## 37	#DIV/0!	29
## 38	#DIV/0!	315
## 39	#DIV/0!	172
## 40	#DIV/0!	147
## 41	#DIV/0!	115
## 42	#DIV/0!	778
##	Male.Number.in.Cohort	Male.Percentage.Graduated
## 37	122	23.77
## 38	334	94.31
## 39	193	89.12
## 40	169	86.98
## 41	151	76.16
## 42	969	80.29
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated
## 37	0	#DIV/0!

## 38	0	#DIV/0!
## 39	0	#DIV/0!
## 40	0	#DIV/0!
## 41	0	#DIV/0!
## 42	0	#DIV/0!
##	Multiple.Races.Graduated Multiple.Races.Number.in.Cohort	
## 37	0	0
## 38	28	29
## 39	11	11
## 40	0	0
## 41	0	0
## 42	39	40
##	Multiple.Races.Percentage.Graduated	
## 37	#DIV/0!	
## 38	96.55	
## 39	100	
## 40	#DIV/0!	
## 41	#DIV/0!	
## 42	97.5	
##	Native.Hawaiian.or.Pacific.Islander.Graduated	
## 37	0	
## 38	0	
## 39	0	
## 40	0	
## 41	0	
## 42	0	
##	Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort	
## 37	0	
## 38	0	
## 39	0	
## 40	0	
## 41	0	
## 42	0	
##	Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated	
## 37	#DIV/0!	
## 38	#DIV/0!	
## 39	#DIV/0!	
## 40	#DIV/0!	
## 41	#DIV/0!	
## 42	#DIV/0!	
##	Students.With.Disabilities.Graduated	
## 37	2	
## 38	28	
## 39	25	
## 40	18	
## 41	26	
## 42	99	
##	Students.With.Disabilities.Number.in.Cohort	
## 37	11	
## 38	37	
## 39	36	
## 40	27	
## 41	40	
## 42	151	



```
##      Students.With.Disabilities.Percentage.Graduated White.Graduated
## 37                                18.18                14
## 38                                75.68               399
## 39                                69.44               101
## 40                                66.67               117
## 41                                 65                  31
## 42                                65.56               662
##      White.Number.in.Cohort White.Percentage.Graduated
## 37                                52                 26.92
## 38                               412                 96.84
## 39                               110                 91.82
## 40                               135                 86.67
## 41                                35                 88.57
## 42                               744                 88.98
```

```
GR_2017 <- GR[ which(GR$Year..end.year.of.academic.year=='2017'
& GR$All.Subgroups.Number.in.Cohort < 5000), ]
tail(GR_2017)
```

```
##      School.Name Year..end.year.of.academic.year.
## 46      Compadre High School                2017
## 47    Corona Del Sol High School            2017
## 48    Marcos De Niza High School            2017
## 49    Mcclintock High School                2017
## 50      Tempe High School                   2017
## 51 Grand Total Tempe High Schools           2017
##      All.Subgroups.Graduated All.Subgroups.Number.in.Cohort
## 46                                55                169
## 47                               672                700
## 48                               284                333
## 49                               370                408
## 50                               294                332
## 51                               1675               1942
##      All.Subgroups.Percentage.Graduated
## 46                                32.54
## 47                               96.00
## 48                               85.29
## 49                               90.69
## 50                               88.55
## 51                               86.25
##      American.Indian.or.Alaska.Native.Graduated
## 46                                 9
## 47                                11
## 48                                25
## 49                                14
## 50                                 0
## 51                                59
##      American.Indian.or.Alaska.Native.Number.in.Cohort
## 46                                22
## 47                                12
## 48                                31
## 49                                16
## 50                                 0
## 51                                81
```

##	American.Indian.or.Alaska.Native.Percentage.Graduated	Asian.Graduated
## 46	40.91	0
## 47	91.67	64
## 48	80.65	12
## 49	87.5	20
## 50	#DIV/0!	0
## 51	72.84	96
##	Asian.Number.in.Cohort	Asian.Percentage.Graduated
## 46	0	#DIV/0!
## 47	66	96.97
## 48	13	92.31
## 49	21	95.24
## 50	0	#DIV/0!
## 51	100	96
##	Black.or.African.American.Graduated	
## 46	9	
## 47	37	
## 48	26	
## 49	40	
## 50	34	
## 51	146	
##	Black.or.African.American.Number.in.Cohort	
## 46	30	
## 47	40	
## 48	30	
## 49	41	
## 50	38	
## 51	179	
##	Black.or.African.American.Percentage.Graduated	
## 46	30.00	
## 47	92.50	
## 48	86.67	
## 49	97.56	
## 50	89.47	
## 51	81.56	
##	Economically.Disadvantaged.Graduated	
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
##	Economically.Disadvantaged.Number.in.Cohort	
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
##	Economically.Disadvantaged.Percentage.Graduated	Female.Graduated
## 46	#DIV/0!	32
## 47	#DIV/0!	335
## 48	#DIV/0!	140
## 49	#DIV/0!	186

## 50		#DIV/0!	162
## 51		#DIV/0!	855
##	Female.Number.in.Cohort	Female.Percentage.Graduated	
## 46	83	38.55	
## 47	345	97.10	
## 48	161	86.96	
## 49	201	92.54	
## 50	172	94.19	
## 51	962	88.88	
##	Hispanic.or.Latino.Graduated	Hispanic.or.Latino.Number.in.Cohort	
## 46	25	90	
## 47	132	141	
## 48	139	167	
## 49	136	156	
## 50	216	241	
## 51	648	795	
##	Hispanic.or.Latino.Percentage.Graduated	Limited.English.Proficient.Graduated	
## 46	27.78	0	
## 47	93.62	0	
## 48	83.23	0	
## 49	87.18	0	
## 50	89.63	0	
## 51	81.51	0	
##	Limited.English.Proficient.Number.in.Cohort		
## 46	0		
## 47	0		
## 48	0		
## 49	0		
## 50	0		
## 51	0		
##	Limited.English.Proficient.Percentage.Graduated	Male.Graduated	
## 46	#DIV/0!	23	
## 47	#DIV/0!	337	
## 48	#DIV/0!	144	
## 49	#DIV/0!	184	
## 50	#DIV/0!	132	
## 51	#DIV/0!	820	
##	Male.Number.in.Cohort	Male.Percentage.Graduated	Migrant.Graduated
## 46	86	26.74	0
## 47	355	94.93	0
## 48	172	83.72	0
## 49	207	88.89	0
## 50	160	82.50	0
## 51	890	92.13	0
##	Migrant.Number.in.Cohort	Migrant.Percentage.Graduated	
## 46	0	#DIV/0!	
## 47	0	#DIV/0!	
## 48	0	#DIV/0!	
## 49	0	#DIV/0!	
## 50	0	#DIV/0!	
## 51	0	#DIV/0!	
##	Multiple.Races.Graduated	Multiple.Races.Number.in.Cohort	
## 46	0	0	
## 47	45	47	

## 48	0	0
## 49	17	17
## 50	0	0
## 51	62	64
## Multiple.Races.Percentage.Graduated		
## 46	#DIV/0!	
## 47	95.74	
## 48	#DIV/0!	
## 49	100	
## 50	#DIV/0!	
## 51	96.88	
## Native.Hawaiian.or.Pacific.Islander.Graduated		
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
## Native.Hawaiian.or.Pacific.Islander.Number.in.Cohort		
## 46	0	
## 47	0	
## 48	0	
## 49	0	
## 50	0	
## 51	0	
## Native.Hawaiian.or.Pacific.Islander.Percentage.Graduated		
## 46	#DIV/0!	
## 47	#DIV/0!	
## 48	#DIV/0!	
## 49	#DIV/0!	
## 50	#DIV/0!	
## 51	#DIV/0!	
## Students.With.Disabilities.Graduated		
## 46	0	
## 47	27	
## 48	16	
## 49	18	
## 50	24	
## 51	85	
## Students.With.Disabilities.Number.in.Cohort		
## 46	0	
## 47	30	
## 48	30	
## 49	25	
## 50	37	
## 51	122	
## Students.With.Disabilities.Percentage.Graduated White.Graduated		
## 46	#DIV/0!	8
## 47	90	379
## 48	53.33	70
## 49	72	141
## 50	64.86	28
## 51	69.67	626
## White.Number.in.Cohort White.Percentage.Graduated		

```
## 46          18          44.44
## 47         390          97.18
## 48          79          88.61
## 49        155          90.97
## 50          34          82.35
## 51        676          92.60
```

```
# In this part, we have GR_2012, GR_2013, GR_2014, GR_2015, GR_2016, GR_2017
```

```
library("tidyverse")
```

```
## -- Attaching packages ----- tidyverse 1.3.0 --
```

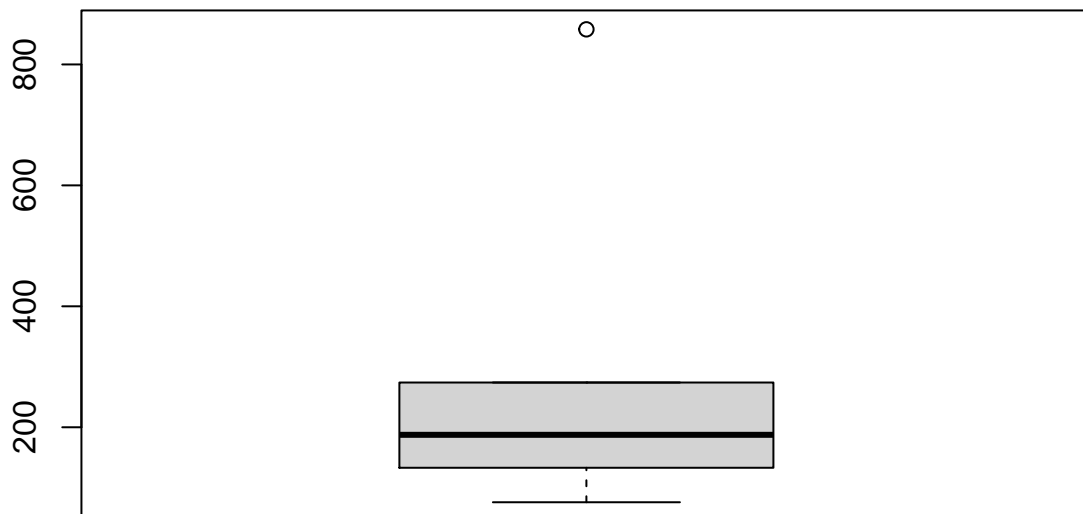
```
## v ggplot2 3.3.3    v purrr  0.3.4
## v tibble  3.1.0    v dplyr  1.0.4
## v tidyr   1.1.2    v stringr 1.4.0
## v readr   1.4.0    v forcats 0.5.1
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

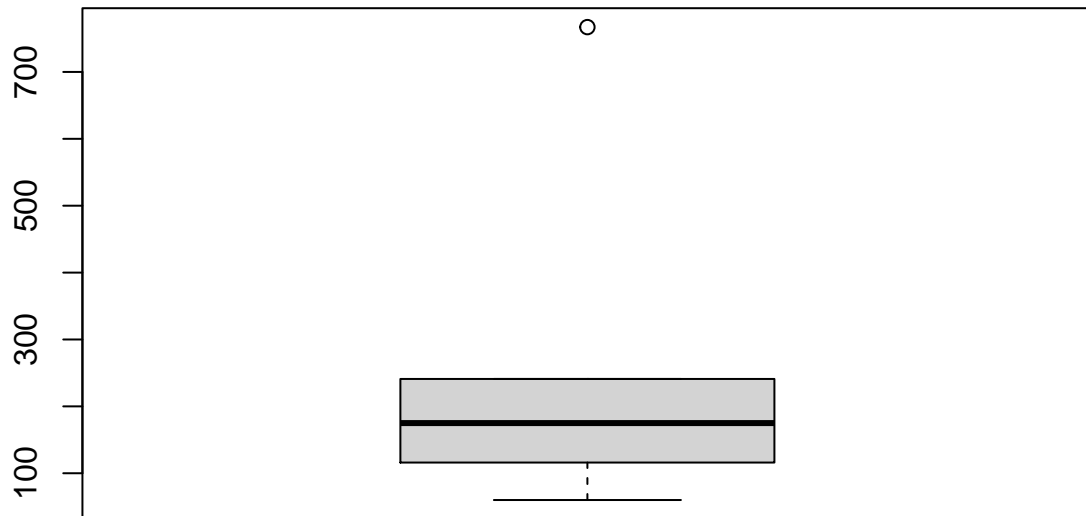
```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
#compare the graduation rate between male and female each year, using boxplot amd scatterplot
```

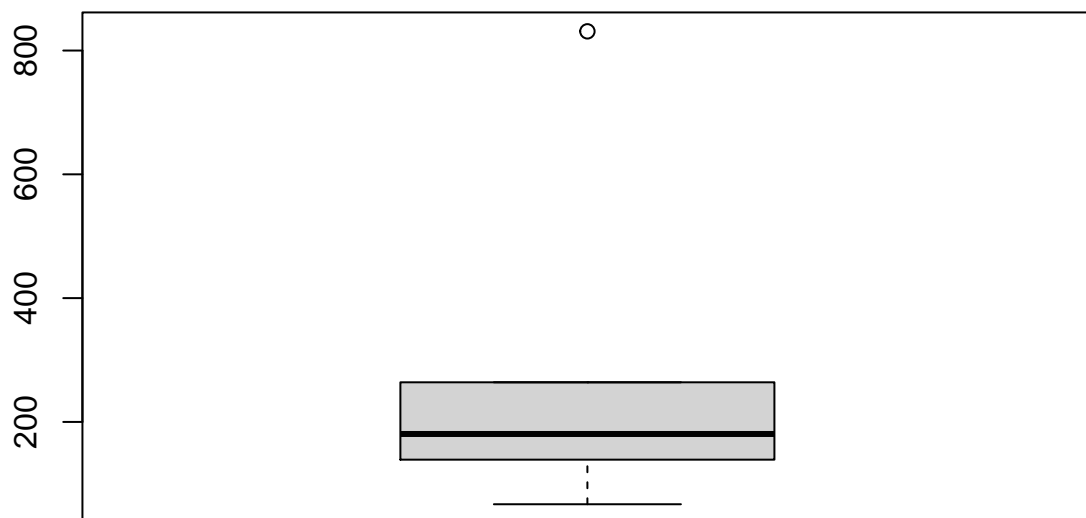
```
boxplot(GR_2012$Female.Graduated)
```



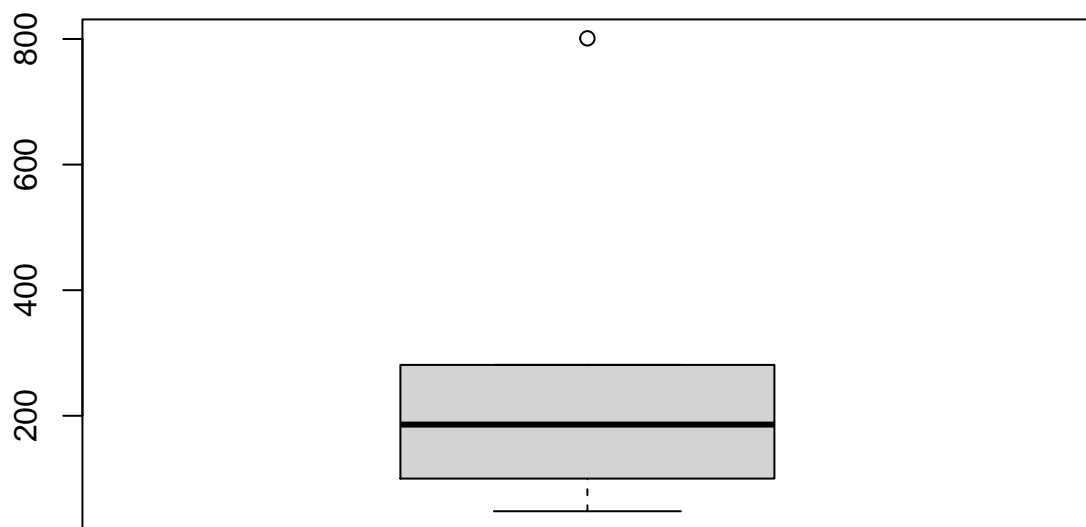
```
boxplot(GR_2012$Male.Graduated)
```



```
boxplot(GR_2013$Female.Graduated)
```

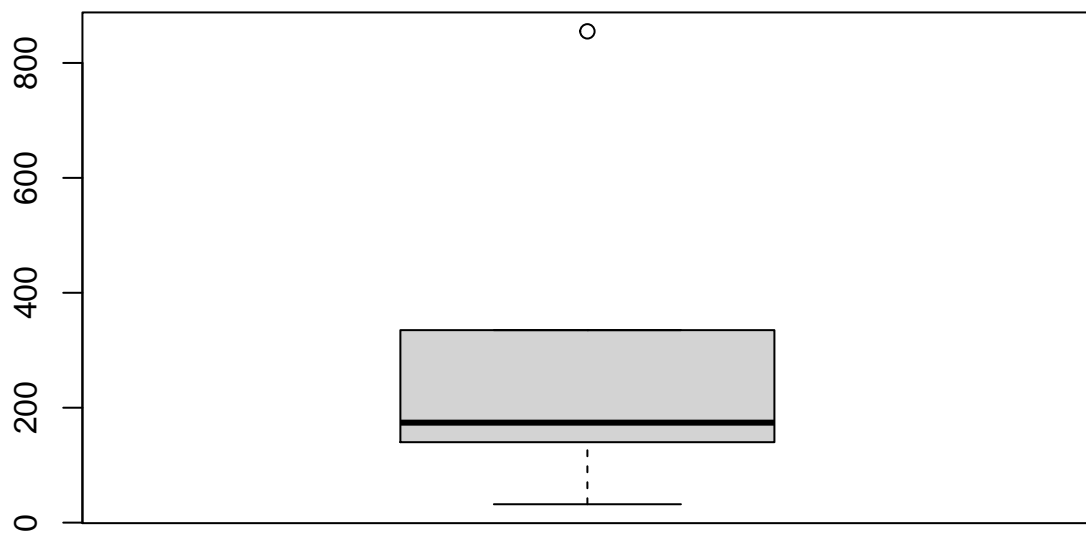


```
boxplot(GR_2013$Male.Graduated)
```

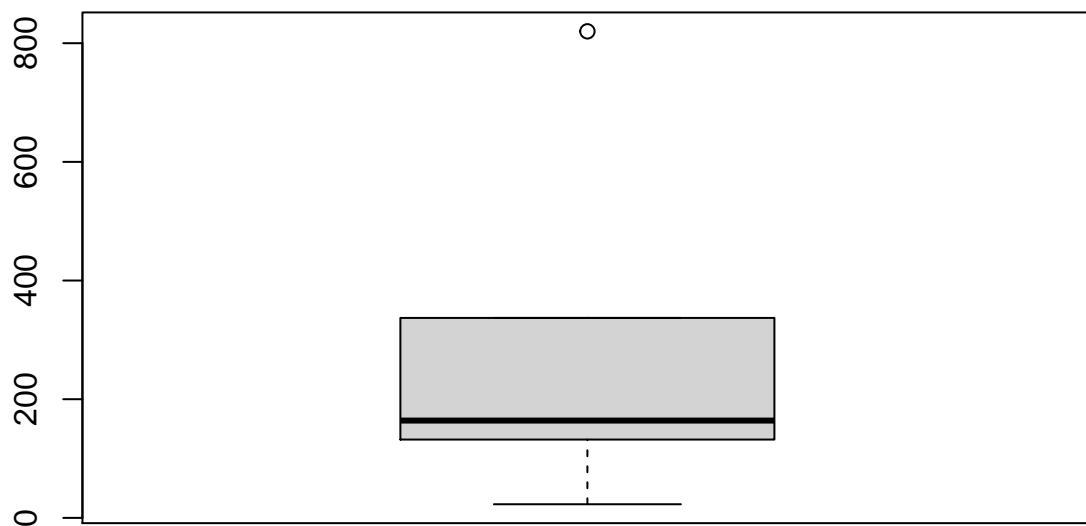


```
boxplot(GR_2017$Female.Graduated)
```

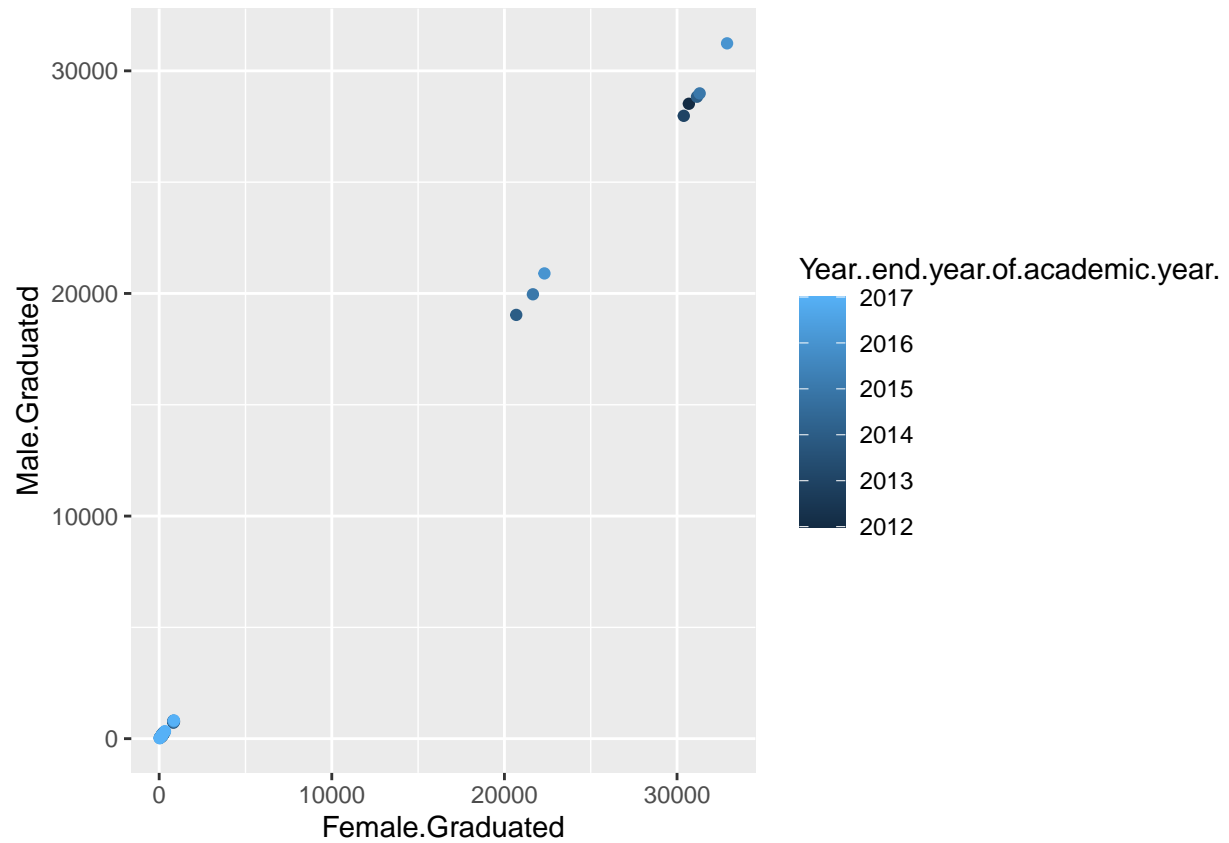




```
boxplot(GR_2017$Male.Graduated)
```

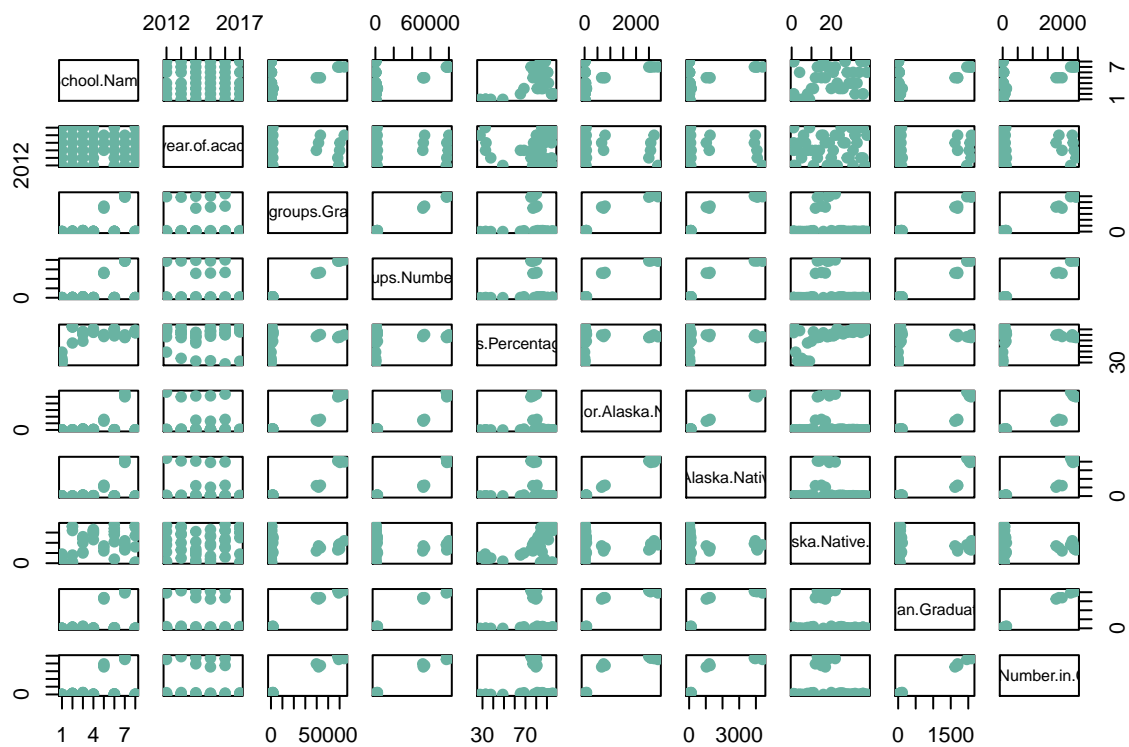


```
ggplot(data = GR_N, mapping = aes(x=Female.Graduated, y=Male.Graduated, color = Year..end.year.of.academ
```

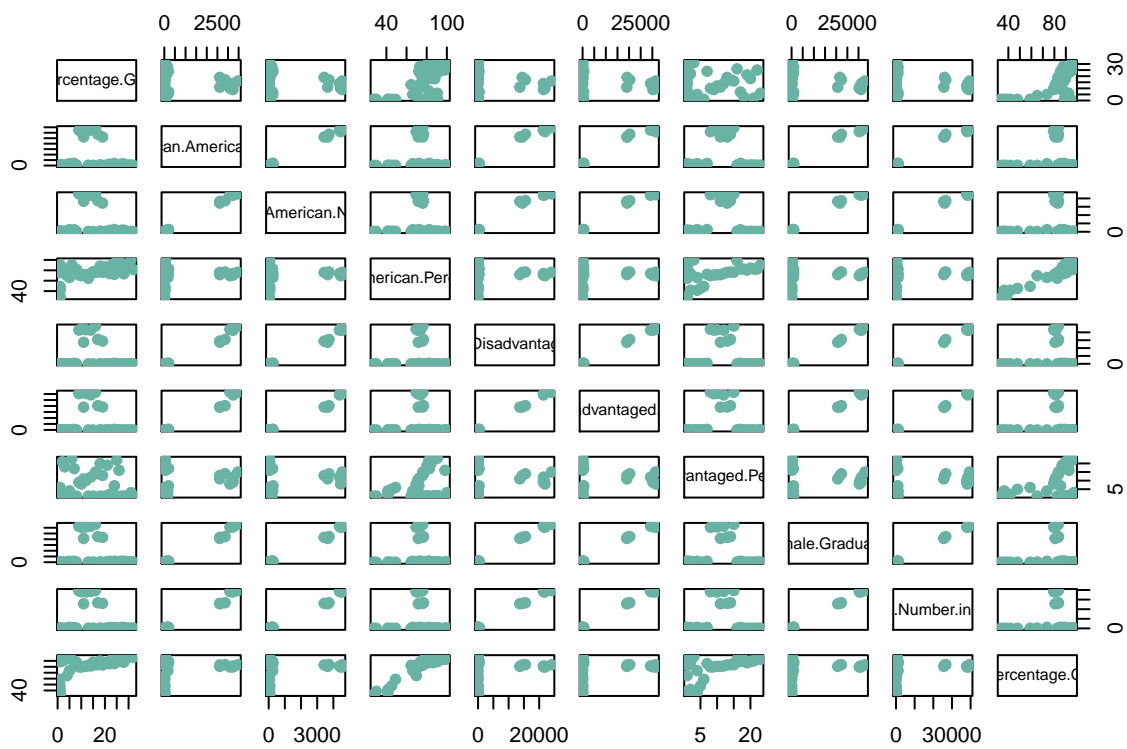


*#making scatterplot matrix, I didn't seem any associate*

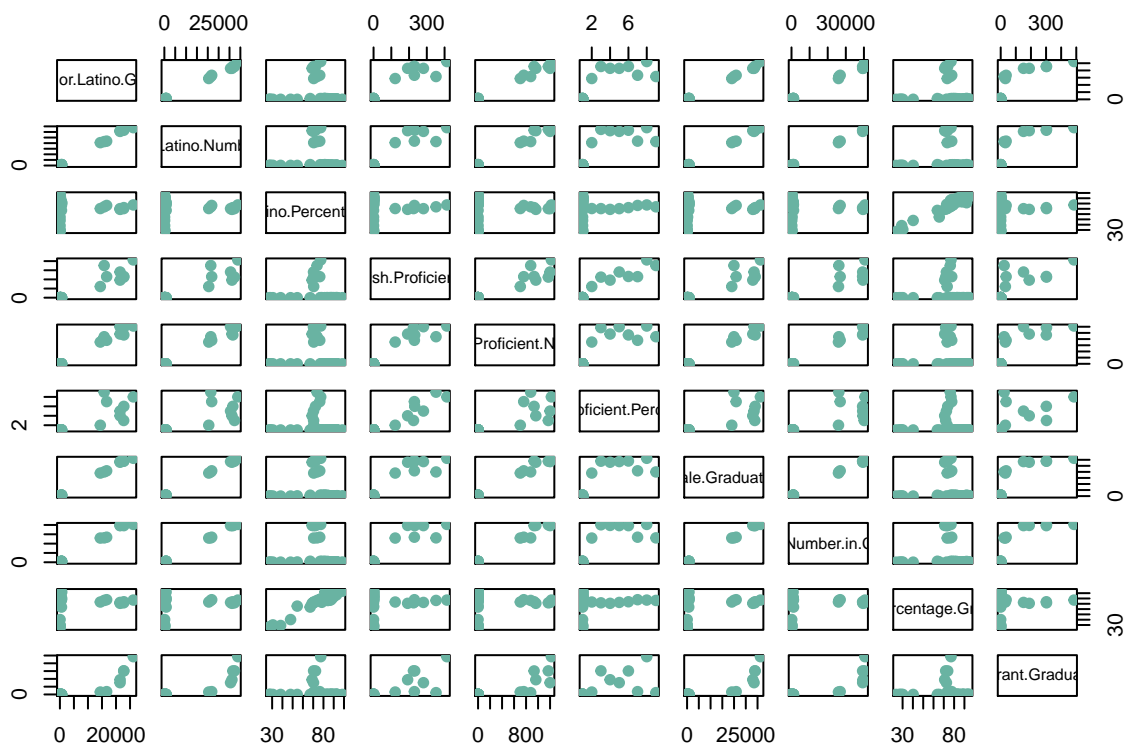
```
GR_1 <- GR_N[,1:10]  
plot(GR_1,pch=20, cex=1.5,col="#69b3a2")
```



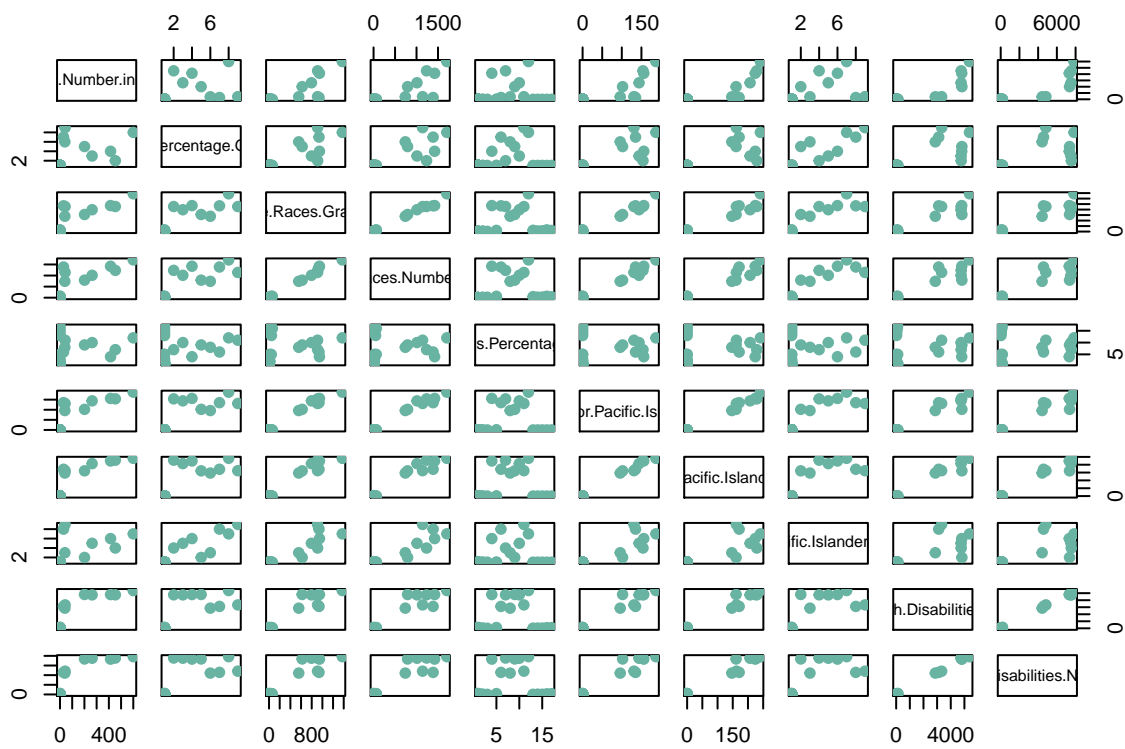
```
GR_2 <- GR_N[,11:20]
plot(GR_2,pch=20, cex=1.5,col="#69b3a2")
```



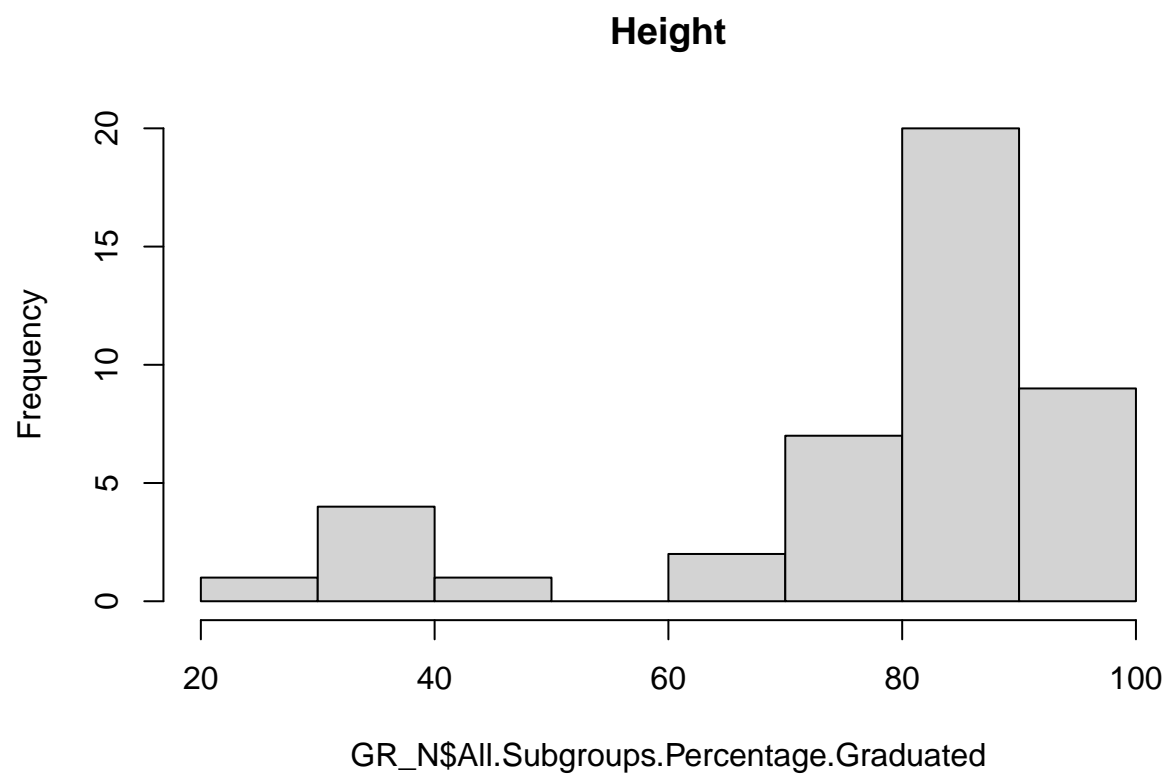
```
GR_3 <- GR_N[,21:30]
plot(GR_3,pch=20, cex=1.5,col="#69b3a2")
```



```
GR_4 <- GR_N[,31:40]
plot(GR_4,pch=20, cex=1.5,col="#69b3a2")
```

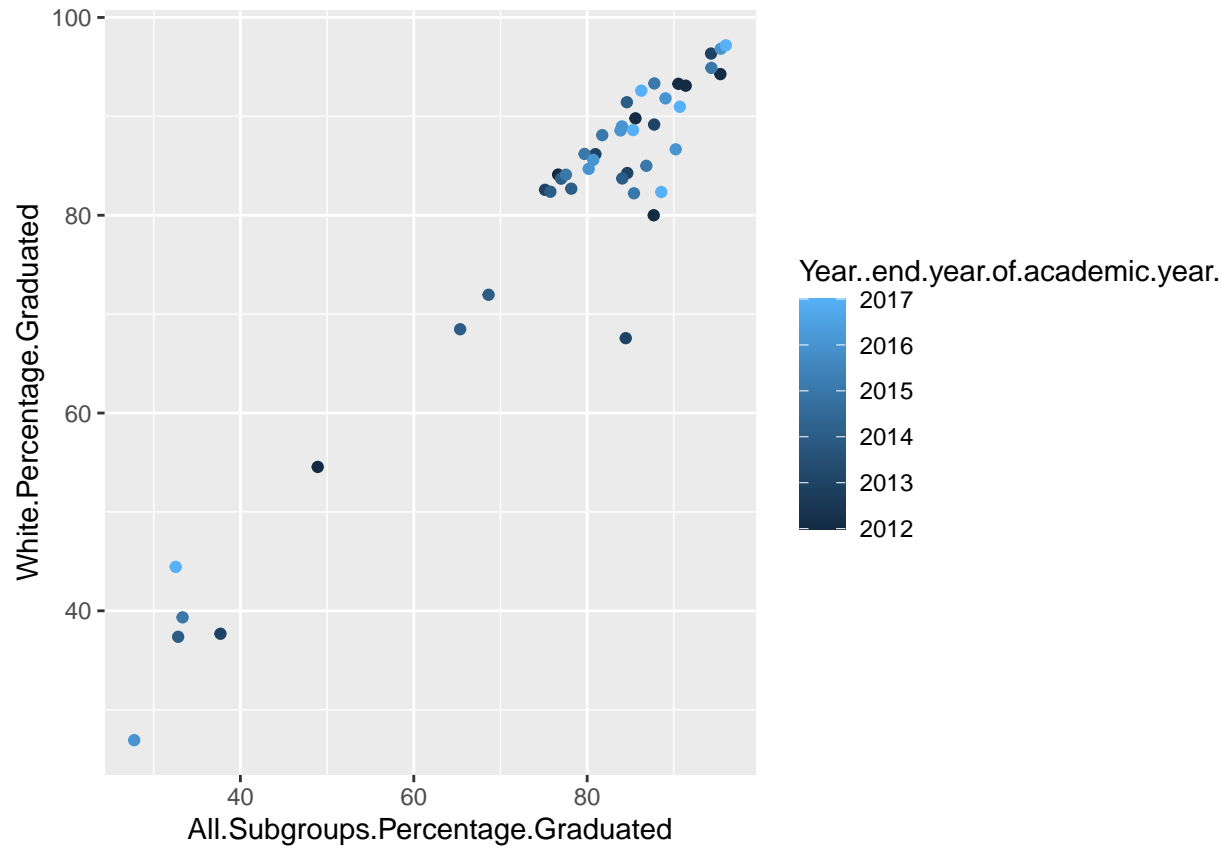


```
hist(GR_N$All.Subgroups.Percentage.Graduated,main = "Height")
```

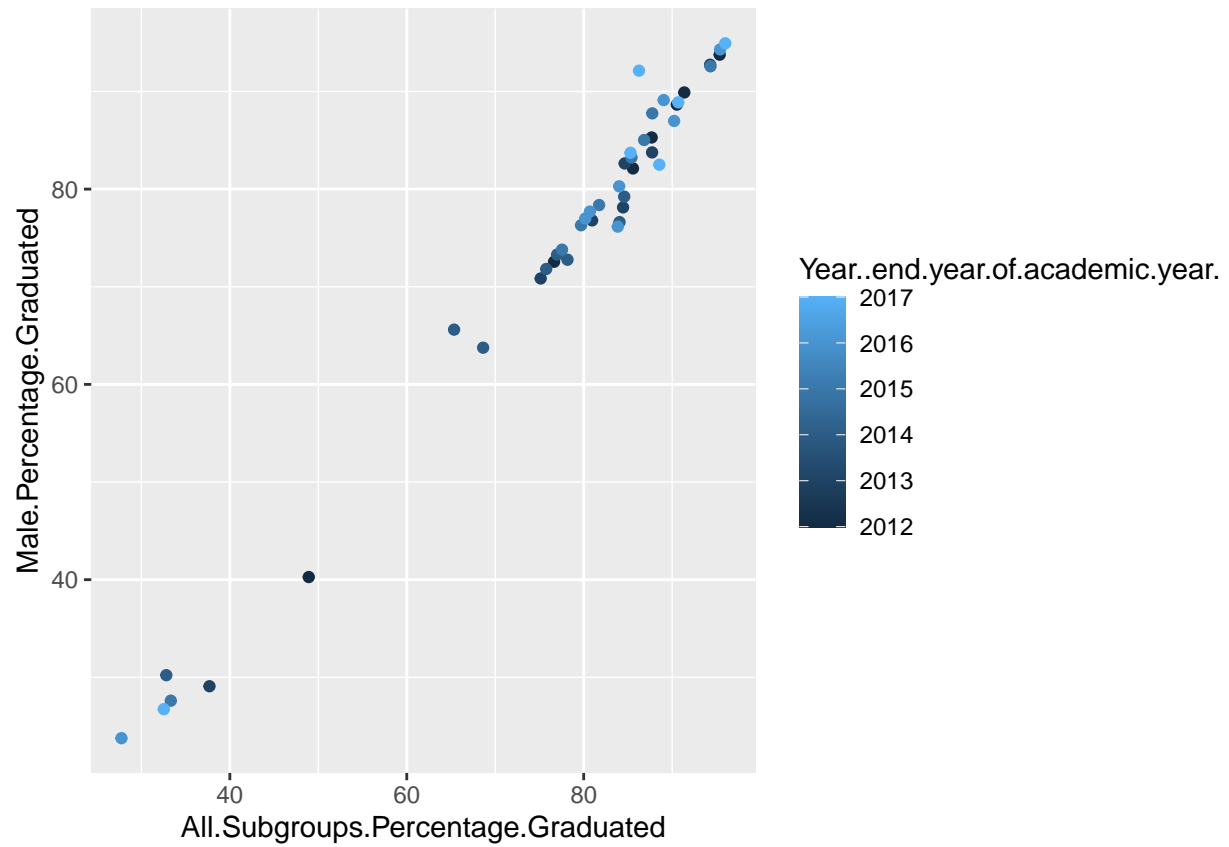


```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=White.Percentage.Graduated, c
```

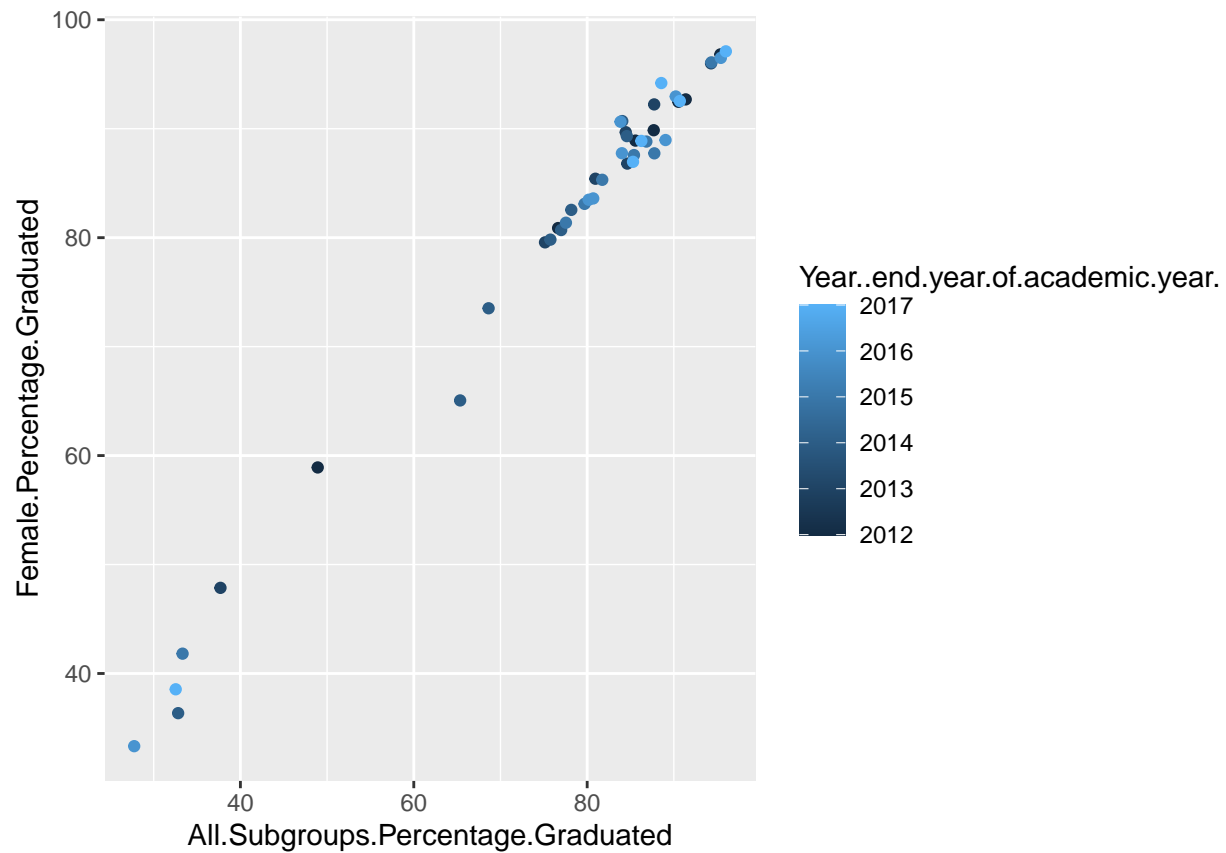




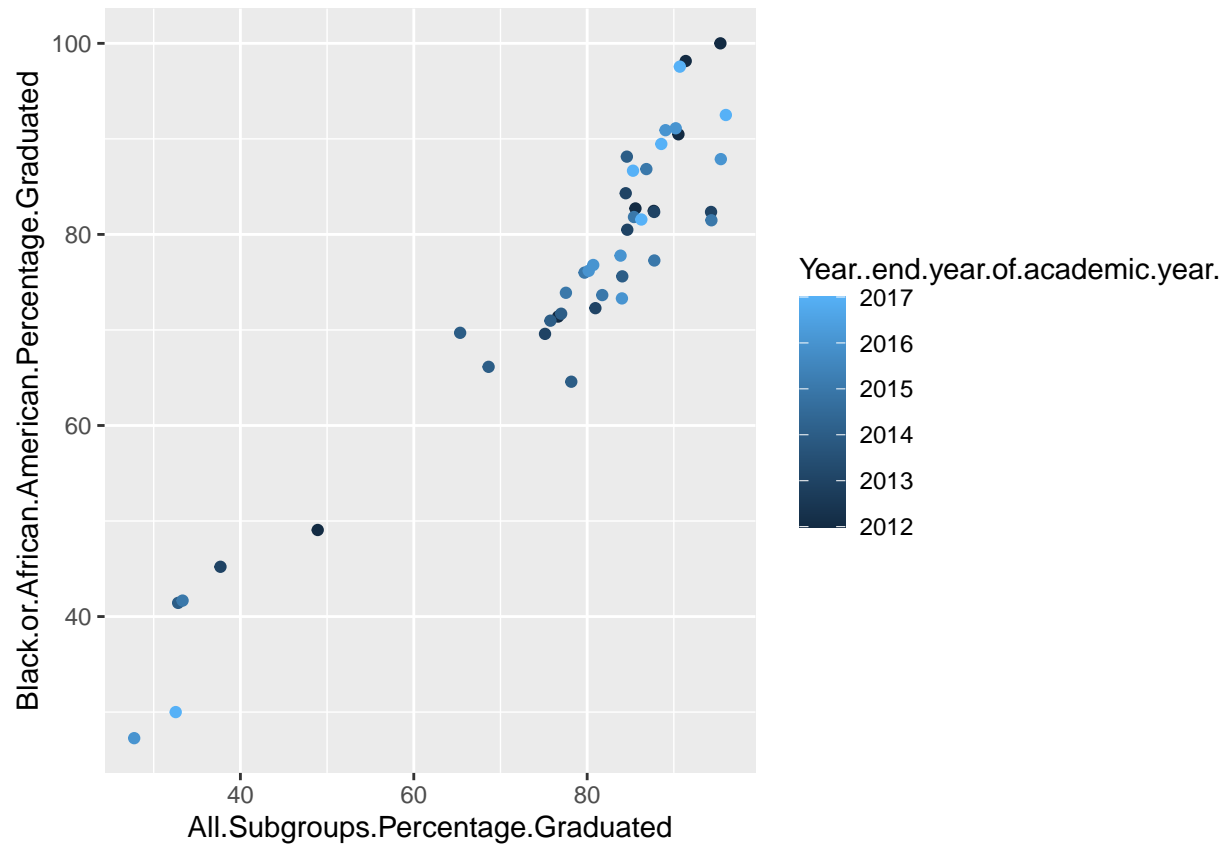
```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=Male.Percentage.Graduated, col=Year..end.year.of.academic.year.))
```



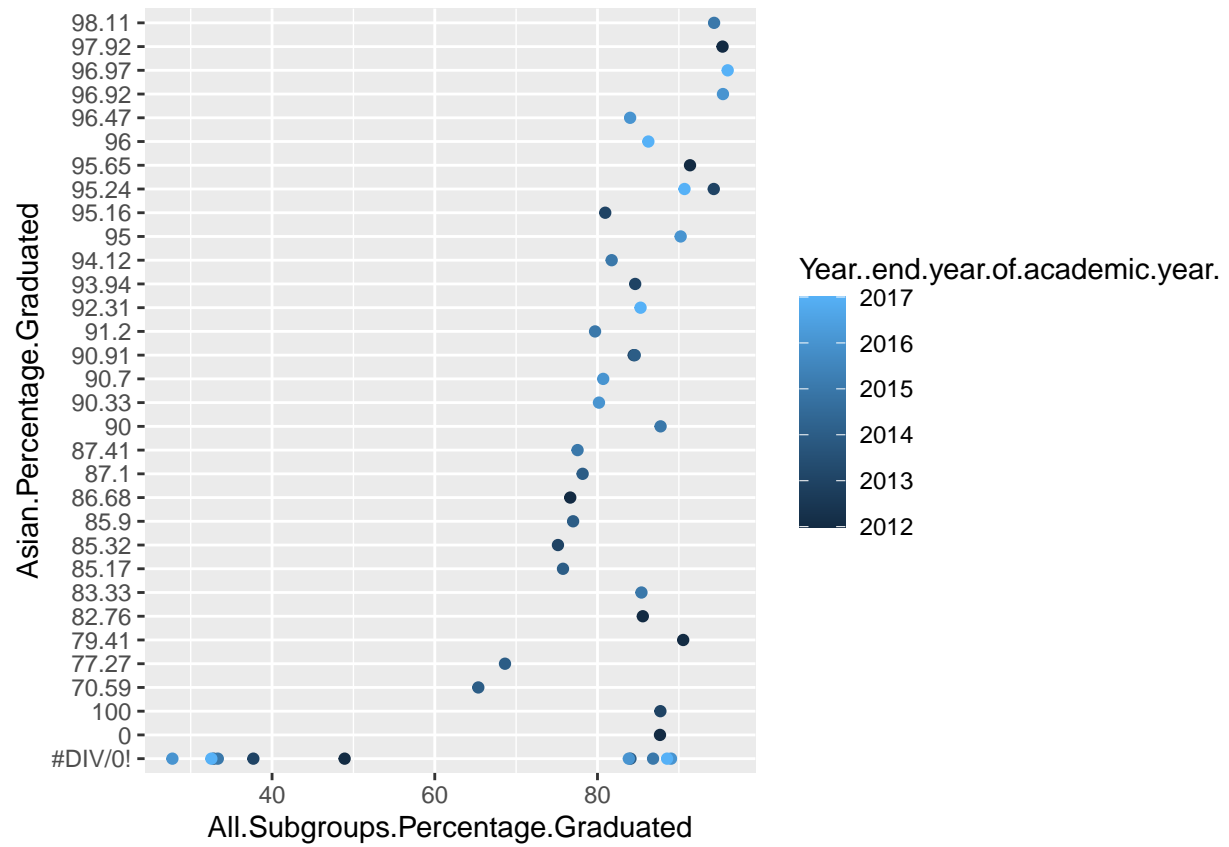
```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=Female.Percentage.Graduated, color=Year..end.year.of.academic.year.))
```



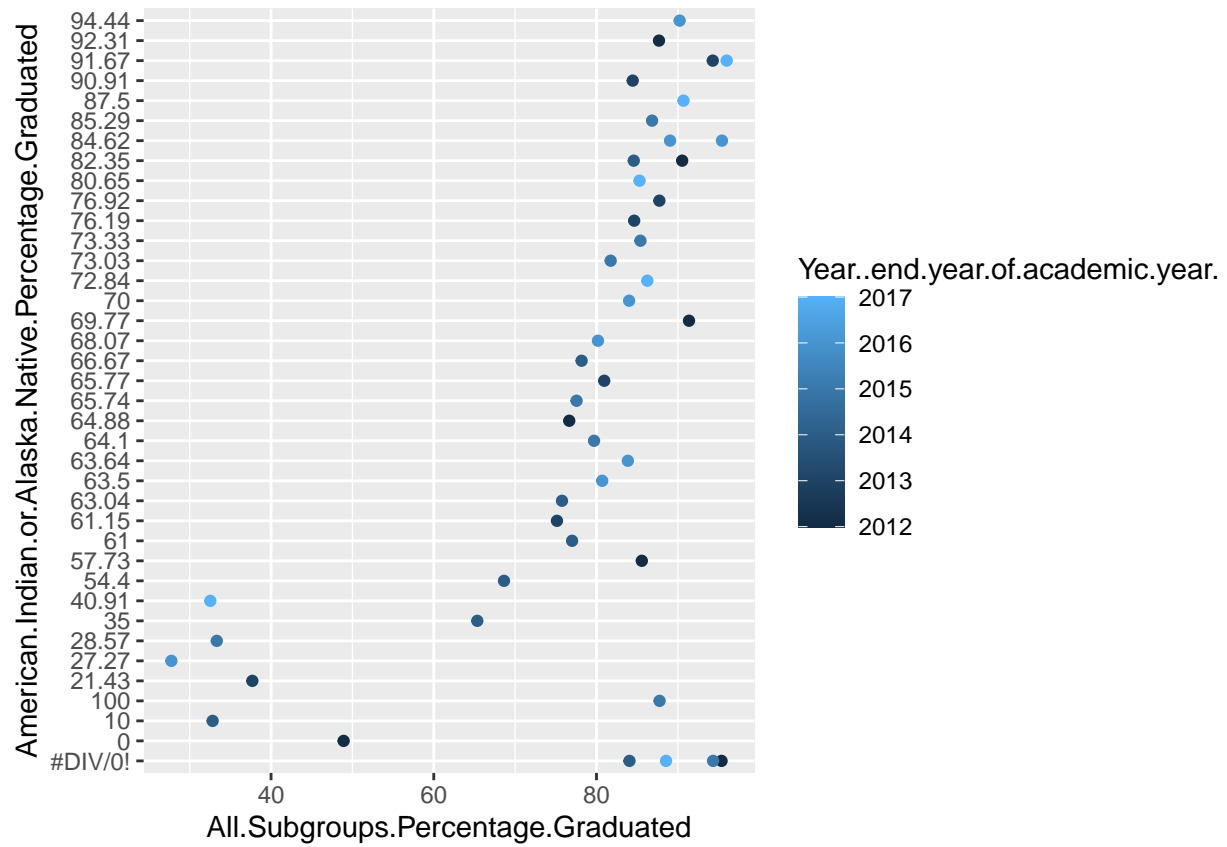
```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=Black.or.African.American.Percentage.Graduated))
```



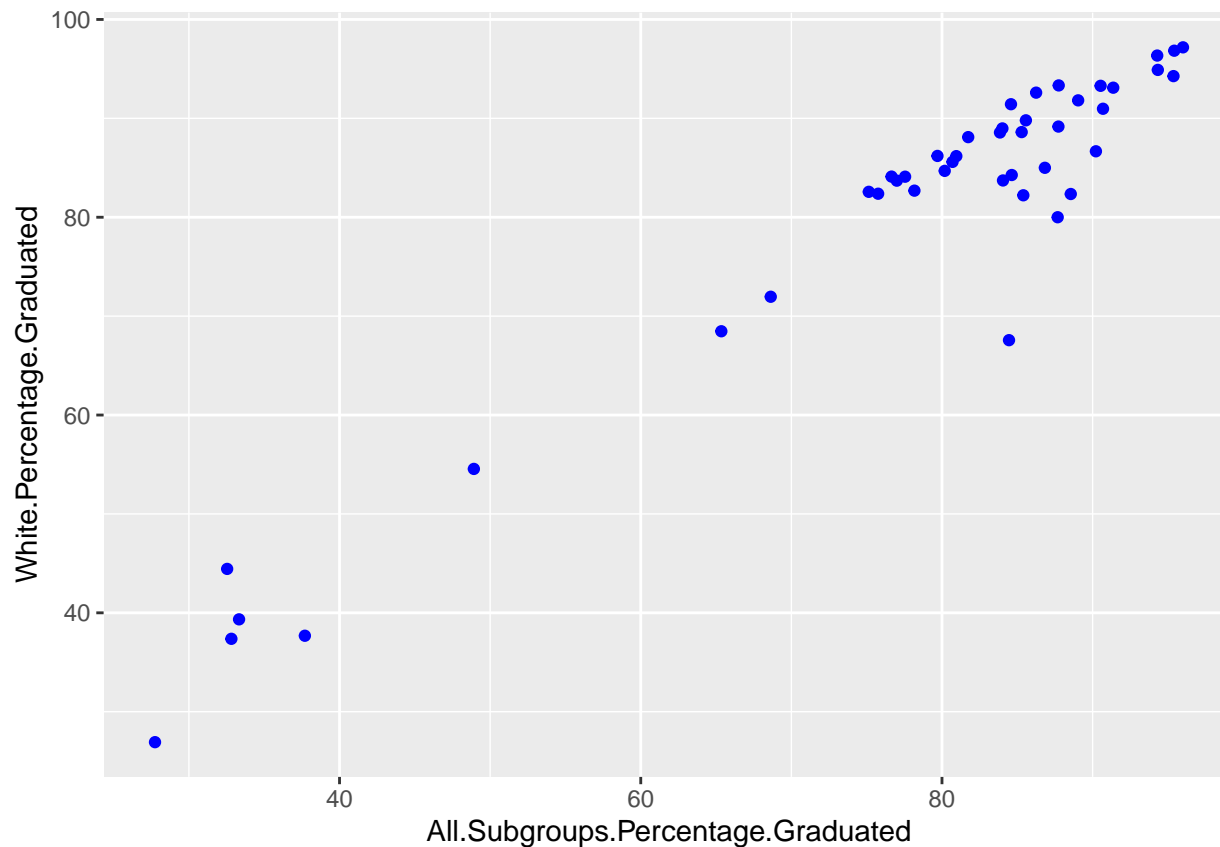
```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=Asian.Percentage.Graduated, color=Year..end.year.of.academic.year.))
```



```
ggplot(data = GR_N, mapping = aes(x=All.Subgroups.Percentage.Graduated, y=American.Indian.or.Alaska.Nat.
```



```
ggplot(GR_N,aes(x = All.Subgroups.Percentage.Graduated, y = White.Percentage.Graduated))+geom_point(col
```

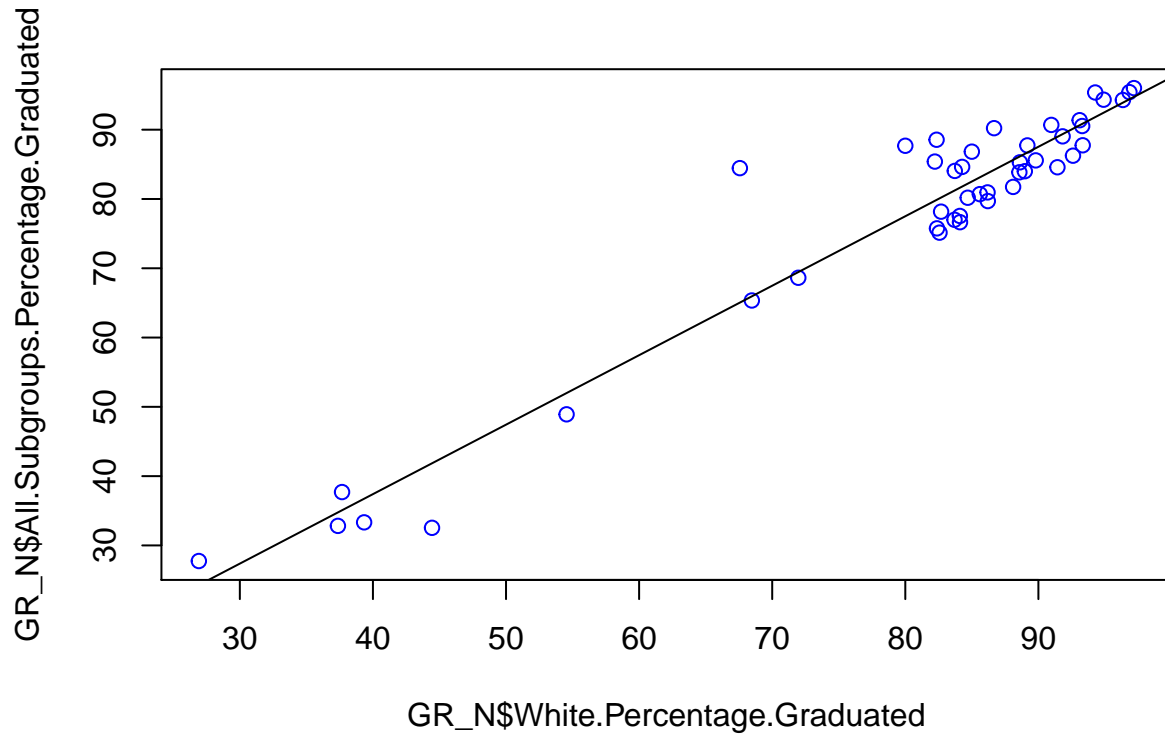


```
#white
linearGR_AandW <- lm(All.Subgroups.Percentage.Graduated~White.Percentage.Graduated,GR_N)

summary(linearGR_AandW)
```

```
##
## Call:
## lm(formula = All.Subgroups.Percentage.Graduated ~ White.Percentage.Graduated,
##     data = GR_N)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -9.313  -3.195  -0.834   2.293  19.405
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    -2.70594     3.50504  -0.772   0.444
## White.Percentage.Graduated  1.00268     0.04264  23.516 <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 4.948 on 42 degrees of freedom
## Multiple R-squared:  0.9294, Adjusted R-squared:  0.9277
## F-statistic: 553 on 1 and 42 DF, p-value: < 2.2e-16
```

```
plot(GR_N$All.Subgroups.Percentage.Graduated~GR_N$White.Percentage.Graduated, col='blue')+abline(linear
```



```
## integer(0)
```

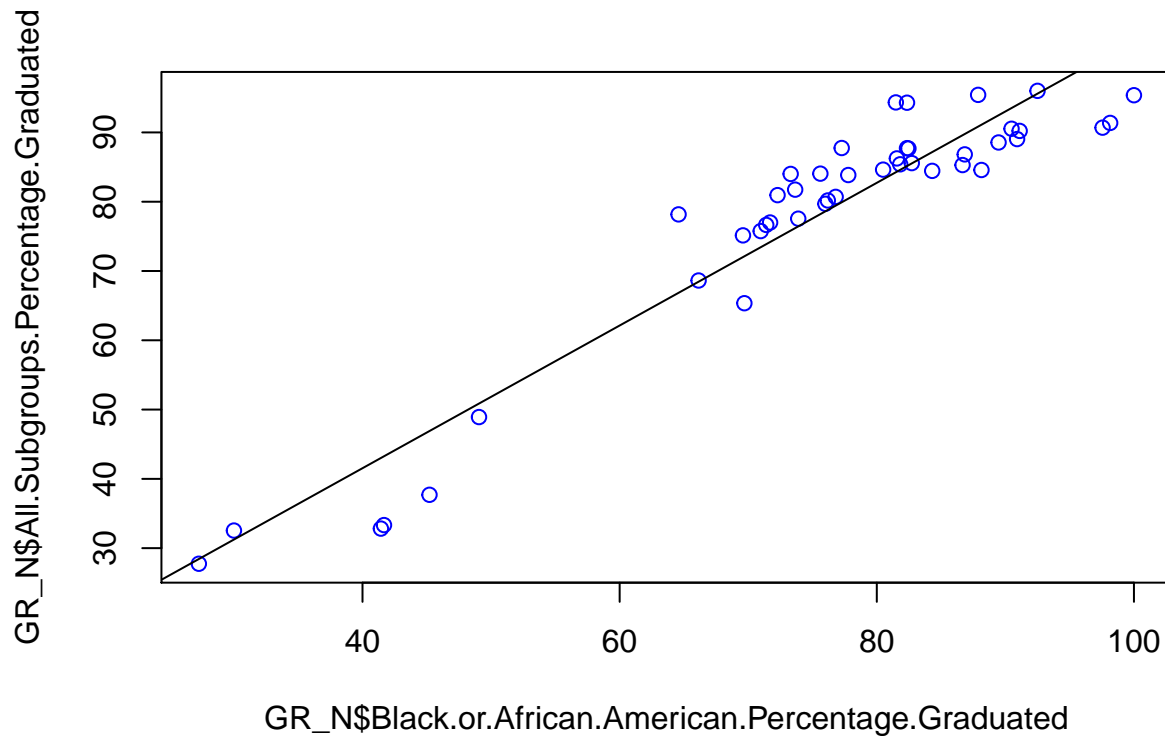
```
#Black
linearGR_AandB <- lm(All.Subgroups.Percentage.Graduated~Black.or.African.American.Percentage.Graduated,
summary(linearGR_AandB)
```

```
##
## Call:
## lm(formula = All.Subgroups.Percentage.Graduated ~ Black.or.African.American.Percentage.Graduated,
##     data = GR_N)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -10.191  -3.932   1.104   2.899  11.322
##
## Coefficients:
##              Estimate Std. Error t value
## (Intercept)      0.35055     3.96237   0.088
## Black.or.African.American.Percentage.Graduated  1.02969     0.05139  20.036
##              Pr(>|t|)
## (Intercept)              0.93
```



```
## Black.or.African.American.Percentage.Graduated <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 5.732 on 42 degrees of freedom
## Multiple R-squared:  0.9053, Adjusted R-squared:  0.903
## F-statistic: 401.4 on 1 and 42 DF,  p-value: < 2.2e-16
```

```
plot(GR_N$All.Subgroups.Percentage.Graduated~GR_N$Black.or.African.American.Percentage.Graduated, col='')
```



```
## integer(0)
```

```
#Asian
```

```
linearGR_AandA <- lm(All.Subgroups.Percentage.Graduated~Asian.Percentage.Graduated,GR_N)
summary(linearGR_AandA)
```

```
##
## Call:
## lm(formula = All.Subgroups.Percentage.Graduated ~ Asian.Percentage.Graduated,
##     data = GR_N)
##
## Residuals:
```

```
##      Min      1Q Median      3Q      Max
## -30.92    0.00    0.00    0.00   30.37
##
```

```
## Coefficients:
```

```
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      58.671      7.476   7.848 4.57e-06 ***
## Asian.Percentage.Graduated0      29.009      25.896   1.120   0.285
## Asian.Percentage.Graduated100     29.059      25.896   1.122   0.284
## Asian.Percentage.Graduated70.59    6.679      25.896   0.258   0.801
## Asian.Percentage.Graduated77.27    9.959      25.896   0.385   0.707
## Asian.Percentage.Graduated79.41   31.859      25.896   1.230   0.242
## Asian.Percentage.Graduated82.76   26.899      25.896   1.039   0.319
## Asian.Percentage.Graduated83.33   26.729      25.896   1.032   0.322
## Asian.Percentage.Graduated85.17   17.089      25.896   0.660   0.522
## Asian.Percentage.Graduated85.32   16.469      25.896   0.636   0.537
## Asian.Percentage.Graduated85.9    18.329      25.896   0.708   0.493
## Asian.Percentage.Graduated86.68   17.979      25.896   0.694   0.501
## Asian.Percentage.Graduated87.1    19.499      25.896   0.753   0.466
## Asian.Percentage.Graduated87.41   18.879      25.896   0.729   0.480
## Asian.Percentage.Graduated90     29.079      25.896   1.123   0.283
## Asian.Percentage.Graduated90.33   21.509      25.896   0.831   0.422
## Asian.Percentage.Graduated90.7    22.029      25.896   0.851   0.412
## Asian.Percentage.Graduated90.91   25.844      19.059   1.356   0.200
## Asian.Percentage.Graduated91.2    21.029      25.896   0.812   0.433
## Asian.Percentage.Graduated92.31   26.619      25.896   1.028   0.324
## Asian.Percentage.Graduated93.94   25.959      25.896   1.002   0.336
## Asian.Percentage.Graduated94.12   23.069      25.896   0.891   0.391
## Asian.Percentage.Graduated95     31.549      25.896   1.218   0.247
## Asian.Percentage.Graduated95.16   22.279      25.896   0.860   0.406
## Asian.Percentage.Graduated95.24   33.819      19.059   1.774   0.101
## Asian.Percentage.Graduated95.65   32.699      25.896   1.263   0.231
## Asian.Percentage.Graduated96     27.579      25.896   1.065   0.308
## Asian.Percentage.Graduated96.47   25.339      25.896   0.978   0.347
## Asian.Percentage.Graduated96.92   36.749      25.896   1.419   0.181
## Asian.Percentage.Graduated96.97   37.329      25.896   1.441   0.175
## Asian.Percentage.Graduated97.92   36.699      25.896   1.417   0.182
## Asian.Percentage.Graduated98.11   35.659      25.896   1.377   0.194
```

```
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
```

```
## Residual standard error: 24.79 on 12 degrees of freedom
```

```
## Multiple R-squared:  0.4937, Adjusted R-squared:  -0.8143
```

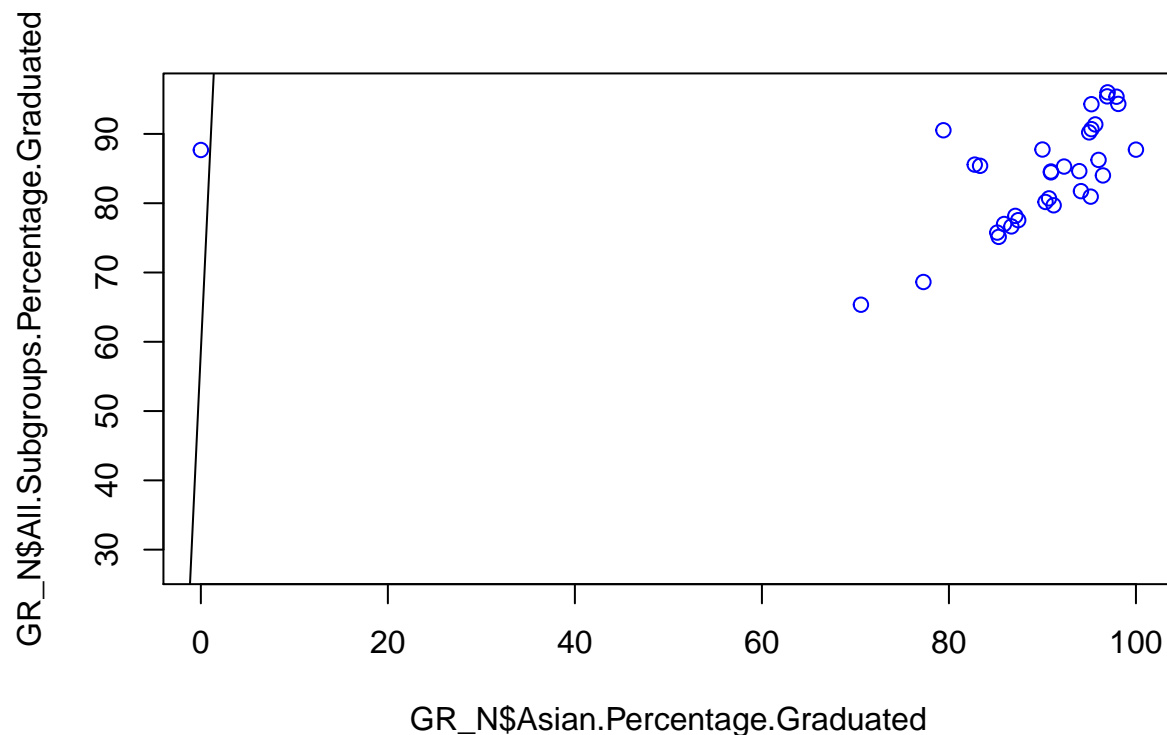
```
## F-statistic: 0.3774 on 31 and 12 DF,  p-value: 0.9856
```

```
plot(GR_N$All.Subgroups.Percentage.Graduated~GR_N$Asian.Percentage.Graduated, col='blue')+abline(linear
```

```
## Warning in xy.coords(x, y, xlabel, ylabel, log): NAs introduced by coercion
```

```
## Warning in abline(linearGR_AandA): only using the first two of 32 regression
```

```
## coefficients
```



```
## integer(0)
```

```
#I
```

```
linearGR_AandI <- lm(All.Subgroups.Percentage.Graduated~American.Indian.or.Alaska.Native.Percentage.Graduated0)
```

```
summary(linearGR_AandI)
```

```
##
```

```
## Call:
```

```
## lm(formula = All.Subgroups.Percentage.Graduated ~ American.Indian.or.Alaska.Native.Percentage.Graduated0,
```

```
## data = GR_N)
```

```
##
```

```
## Residuals:
```

```
##      Min       1Q   Median       3Q      Max
```

```
## -6.525  0.000  0.000  0.000  4.795
```

```
##
```

```
## Coefficients:
```

```
##
```

```
## (Intercept)                                Estimate Std. Error
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated0      -41.655      5.068
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated10     -57.755      5.068
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated100      -2.825      5.068
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated21.43   -52.875      5.068
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated27.27   -62.825      5.068
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated28.57   -57.245      5.068
```

```

## American.Indian.or.Alaska.Native.Percentage.Graduated35      -25.225      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated40.91    -58.035      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated54.4      -21.945      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated57.73      -5.005      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated61      -13.575      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated61.15    -15.435      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated63.04    -14.815      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated63.5      -9.875      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated63.64     -6.725      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated64.1     -10.875      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated64.88    -13.925      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated65.74    -13.025      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated65.77     -9.625      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated66.67    -12.405      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated68.07    -10.395      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated69.77      0.795      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated70      -6.565      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated72.84     -4.325      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated73.03     -8.835      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated73.33     -5.175      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated76.19     -5.945      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated76.92     -2.845      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated80.65     -5.285      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated82.35     -3.020      3.926
## American.Indian.or.Alaska.Native.Percentage.Graduated84.62      1.655      3.926
## American.Indian.or.Alaska.Native.Percentage.Graduated85.29     -3.745      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated87.5       0.115      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated90.91     -6.125      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated91.67      4.570      3.926
## American.Indian.or.Alaska.Native.Percentage.Graduated92.31     -2.895      5.068
## American.Indian.or.Alaska.Native.Percentage.Graduated94.44     -0.355      5.068
##
##                                     t value Pr(>|t|)
## (Intercept)                                     39.963 1.64e-08 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated0        -8.219 0.000175 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated10       -11.396 2.74e-05 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated100       -0.557 0.597403
## American.Indian.or.Alaska.Native.Percentage.Graduated21.43    -10.433 4.55e-05 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated27.27    -12.397 1.68e-05 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated28.57    -11.295 2.88e-05 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated35        -4.977 0.002508 **
## American.Indian.or.Alaska.Native.Percentage.Graduated40.91    -11.451 2.66e-05 ***
## American.Indian.or.Alaska.Native.Percentage.Graduated54.4      -4.330 0.004928 **
## American.Indian.or.Alaska.Native.Percentage.Graduated57.73     -0.988 0.361496
## American.Indian.or.Alaska.Native.Percentage.Graduated61        -2.679 0.036605 *
## American.Indian.or.Alaska.Native.Percentage.Graduated61.15     -3.046 0.022639 *
## American.Indian.or.Alaska.Native.Percentage.Graduated63.04     -2.923 0.026518 *
## American.Indian.or.Alaska.Native.Percentage.Graduated63.5      -1.949 0.099263 .
## American.Indian.or.Alaska.Native.Percentage.Graduated63.64     -1.327 0.232782
## American.Indian.or.Alaska.Native.Percentage.Graduated64.1      -2.146 0.075539 .
## American.Indian.or.Alaska.Native.Percentage.Graduated64.88     -2.748 0.033395 *
## American.Indian.or.Alaska.Native.Percentage.Graduated65.74     -2.570 0.042331 *
## American.Indian.or.Alaska.Native.Percentage.Graduated65.77     -1.899 0.106289
## American.Indian.or.Alaska.Native.Percentage.Graduated66.67     -2.448 0.049944 *
## American.Indian.or.Alaska.Native.Percentage.Graduated68.07     -2.051 0.086108 .

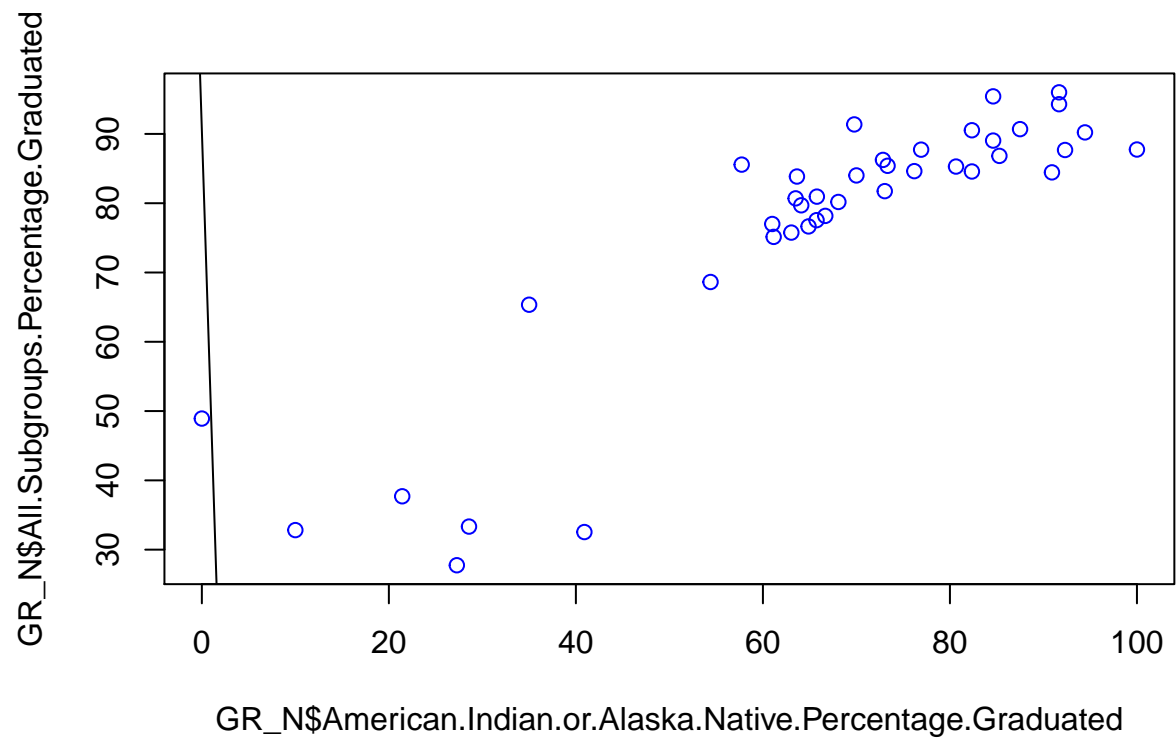
```

```
## American.Indian.or.Alaska.Native.Percentage.Graduated69.77    0.157 0.880494
## American.Indian.or.Alaska.Native.Percentage.Graduated70      -1.295 0.242788
## American.Indian.or.Alaska.Native.Percentage.Graduated72.84   -0.853 0.426188
## American.Indian.or.Alaska.Native.Percentage.Graduated73.03   -1.743 0.131906
## American.Indian.or.Alaska.Native.Percentage.Graduated73.33   -1.021 0.346590
## American.Indian.or.Alaska.Native.Percentage.Graduated76.19   -1.173 0.285229
## American.Indian.or.Alaska.Native.Percentage.Graduated76.92   -0.561 0.594875
## American.Indian.or.Alaska.Native.Percentage.Graduated80.65   -1.043 0.337212
## American.Indian.or.Alaska.Native.Percentage.Graduated82.35   -0.769 0.470902
## American.Indian.or.Alaska.Native.Percentage.Graduated84.62    0.422 0.688011
## American.Indian.or.Alaska.Native.Percentage.Graduated85.29   -0.739 0.487822
## American.Indian.or.Alaska.Native.Percentage.Graduated87.5     0.023 0.982632
## American.Indian.or.Alaska.Native.Percentage.Graduated90.91   -1.209 0.272290
## American.Indian.or.Alaska.Native.Percentage.Graduated91.67    1.164 0.288557
## American.Indian.or.Alaska.Native.Percentage.Graduated92.31   -0.571 0.588581
## American.Indian.or.Alaska.Native.Percentage.Graduated94.44   -0.070 0.946432
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 4.533 on 6 degrees of freedom
## Multiple R-squared:  0.9915, Adjusted R-squared:  0.9394
## F-statistic:    19 on 37 and 6 DF,  p-value: 0.0006683
```

```
plot(GR_N$All.Subgroups.Percentage.Graduated~GR_N$American.Indian.or.Alaska.Native.Percentage.Graduated
```

```
## Warning in xy.coords(x, y, xlabel, ylabel, log): NAs introduced by coercion
```

```
## Warning in abline(linearGR_AandI): only using the first two of 38 regression
## coefficients
```



```
## integer(0)
```