

# Graphics

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```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 3.6.2
```

```
library(tidyverse)
```

```
## Warning: package 'tidyverse' was built under R version 3.6.2
```

```
## -- Attaching packages ----- tidyverse 1.3.1 --
```

```
## v tibble 3.1.4    v dplyr 1.0.7
```

```
## v tidyr 1.1.3     v stringr 1.4.0
```

```
## v readr 2.0.1     v forcats 0.5.1
```

```
## v purrr 0.3.4
```

```
## Warning: package 'tibble' was built under R version 3.6.2
```

```
## Warning: package 'tidyr' was built under R version 3.6.2
```

```
## Warning: package 'readr' was built under R version 3.6.2
```

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## Warning: package 'purrr' was built under R version 3.6.2
```

```
## Warning: package 'dplyr' was built under R version 3.6.2
```

```
## Warning: package 'forcats' was built under R version 3.6.2
```

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

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

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

```
##Create the following graphs in `ggplot2`.
```

```
##Check out the base R built-in dataset, `data("USArrests")`.
```

```
data("USArrests")
```

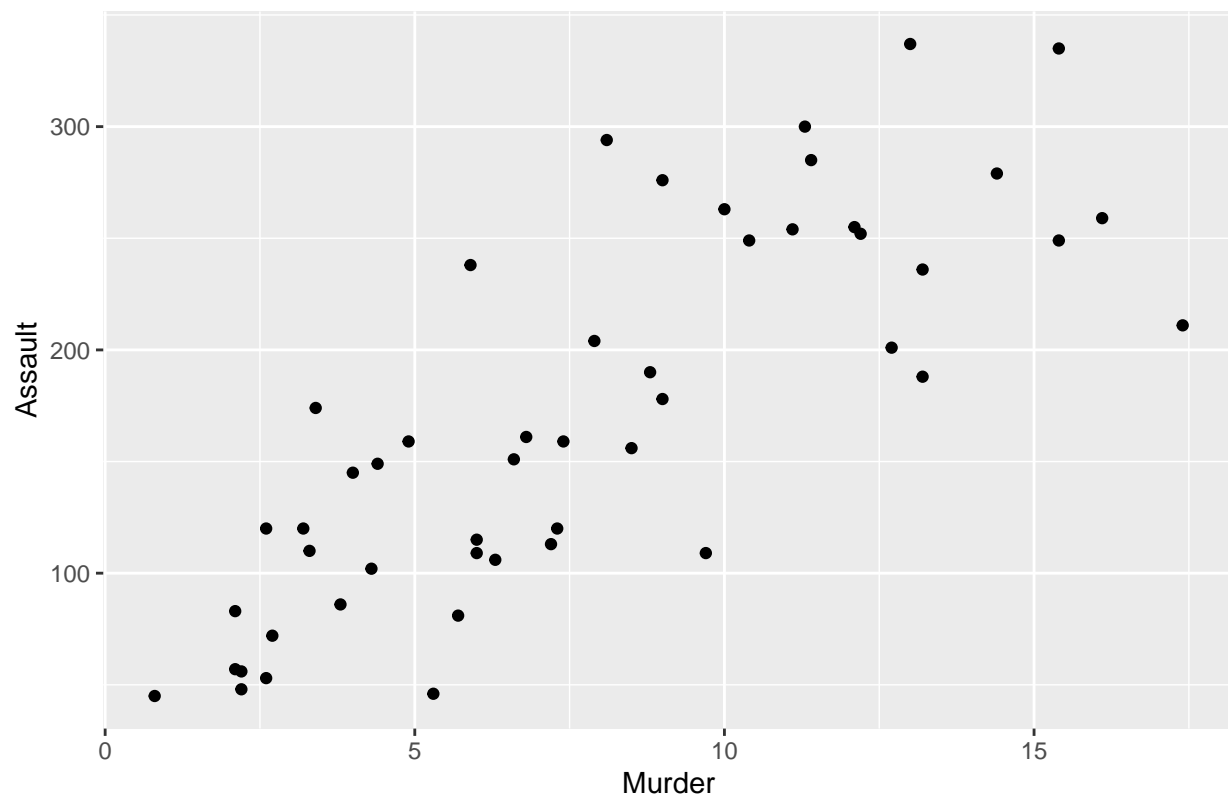
```
head("USArrests")
```

```
## [1] "USArrests"
```

```
##Create a scatterplot that looks at the correlation between murder and assault arrests. Label the x and y axes.
```

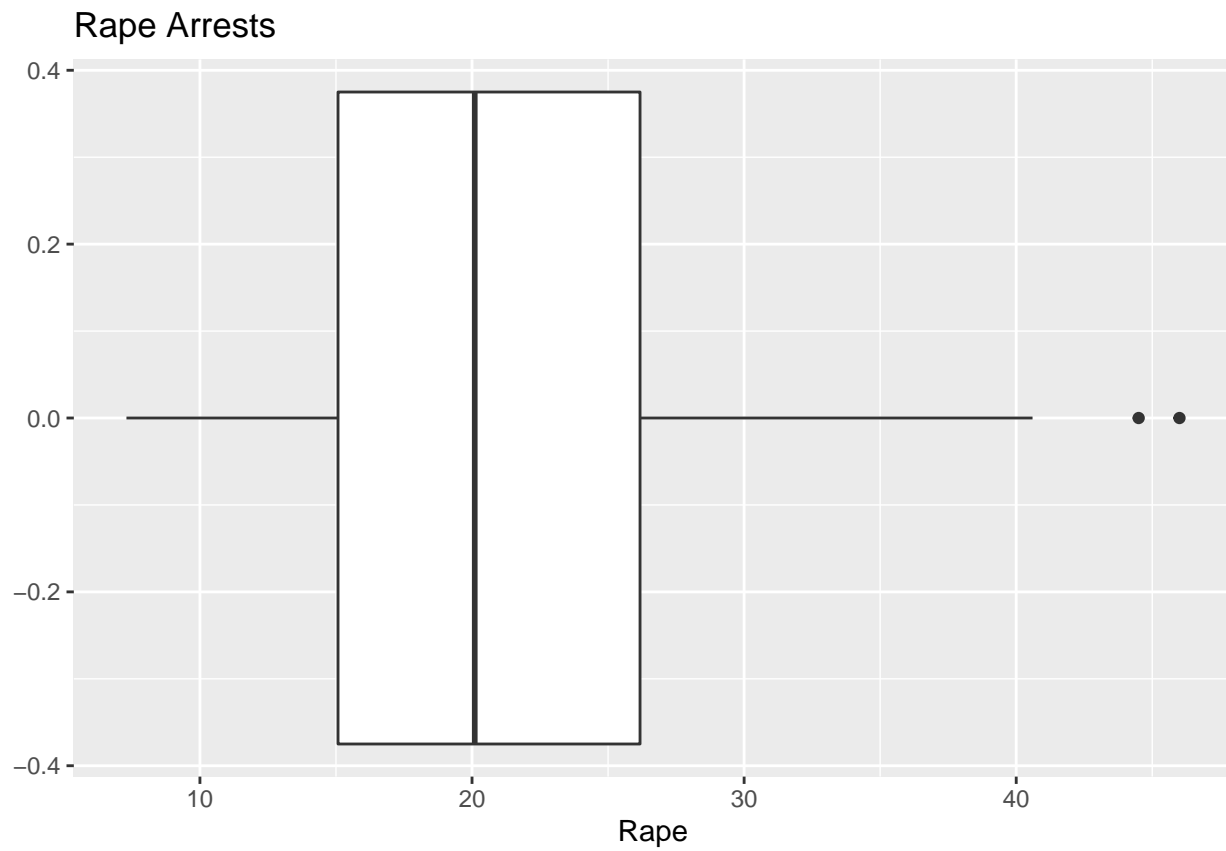
```
ggplot(USArrests, aes(x=Murder, y=Assault)) + geom_point() + labs(title="Murder and Assault Arrests Relationship", x="Murder", y="Assault")
```

Murder and Assault Arrests Relationship



*##Create a boxplot of rape arrests. Label the plot.*

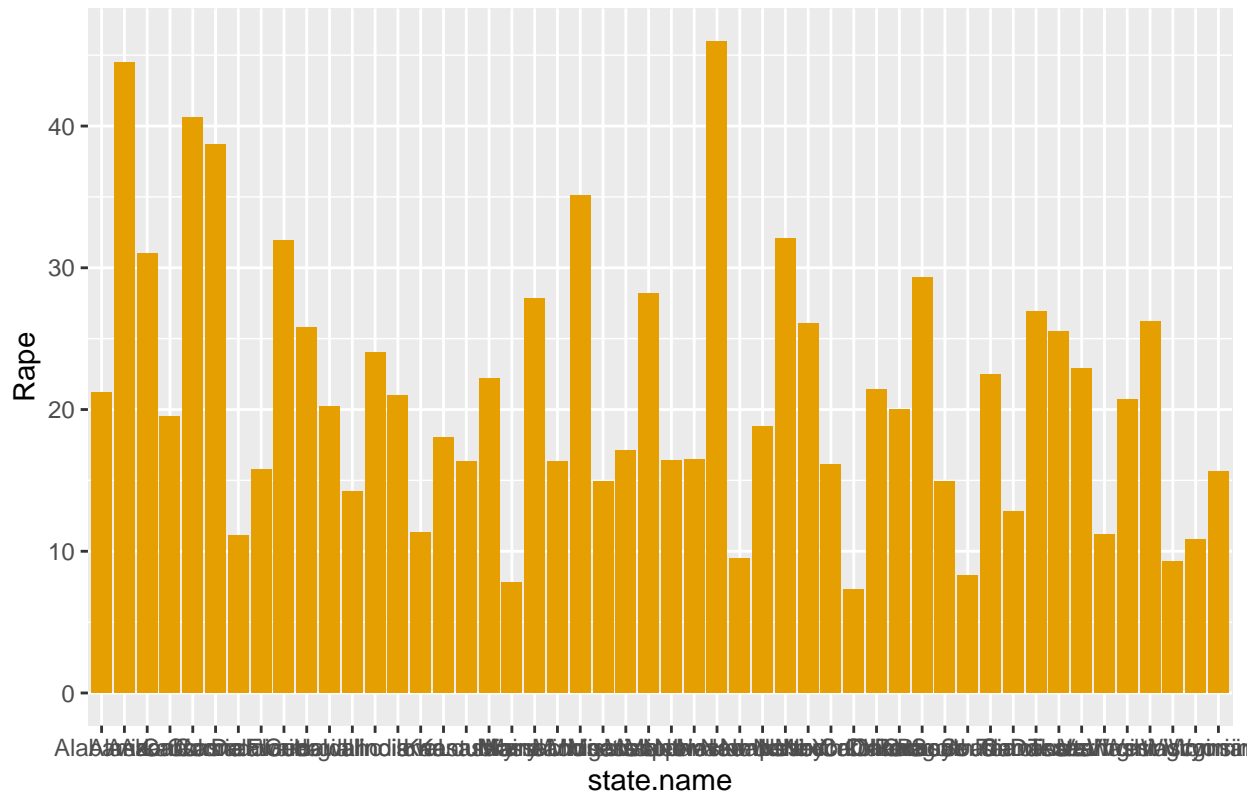
```
ggplot(USArrests, aes(x=Rape)) + geom_boxplot() + labs(title="Rape Arrests")
```



*##Create a barplot of the number of rape arrests per state.*

```
ggplot(USArrests, aes(x=state.name, y=Rape)) + geom_bar(stat="identity", fill="#E69F00") + labs(title="Rape Arrests")
```

Rape Arrests per State



*##Create a histogram for the percent of urban population.*

```
ggplot(USArrests, aes(x=UrbanPop)) + geom_histogram() + labs(title="Percent of Urban Population")
```

## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

