curves

0.1 Libraries

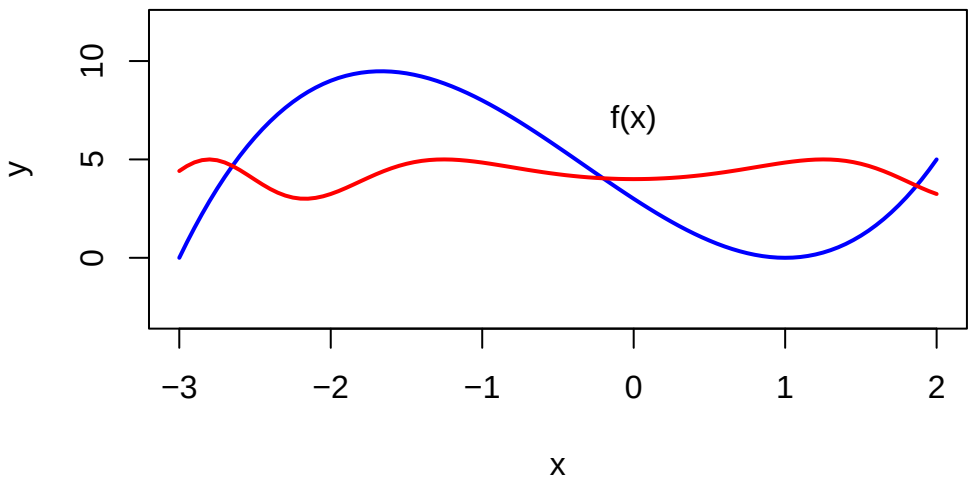
```
library(tidyverse)
```

0.2 BaseR:: curve()

`curve()` is a useful baseR function for plotting continuous functions in R. The ggplot equivalent is `geom_function()` as shown below.

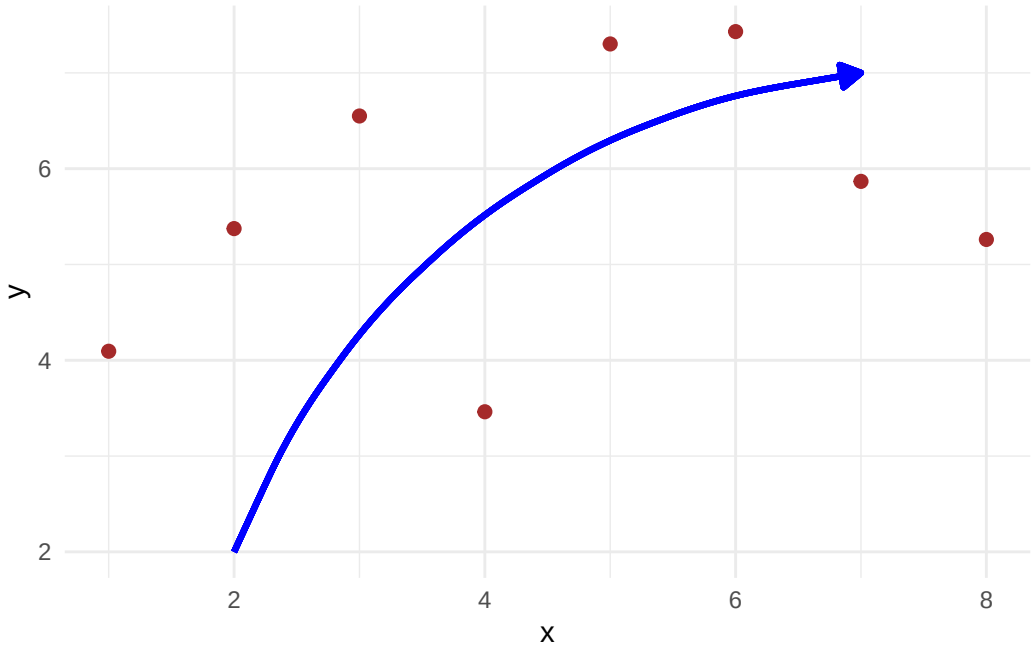
```
ylim=c(-3,12)
curve({(x-1)^2}*(x+3), from=-3, to=2, col="blue", lwd=2, ylim=ylim, ylab="y")
text(0,7,label='f(x)')
# arrow(x,xend, y,yend, size=2)

curve(sin(x^2)+4, from=-3, to=2, col="red", lwd=2, add=TRUE)
```



0.3 ggplot2::geom_curve()

```
df <- data.frame(
  x = 1:8,
  y = rnorm(8, mean = 5, sd = 2)
)
ggplot(df, aes(x, y)) +
  geom_point(size=2, color="brown") +
  geom_curve(aes(x = 2, y = 2, xend = 7, yend = 7),
    arrow = arrow(length = unit(0.3, "cm"), type = "closed"),
    color = "blue",
    size = 1.1,
    curvature = -0.3
  ) +
  theme_minimal()
```



0.4 ggplot2::geom_function()

```
x <- seq(0,10,0.5)
fn <- function(x){
  sqrt(x)*cos(5*x)
```

```
}
ggplot(data.frame(x), aes(x=x))+
  geom_function(fun=fn)+
  theme_bw()+
  ggtitle("geom_function()")
```