plots 26092023

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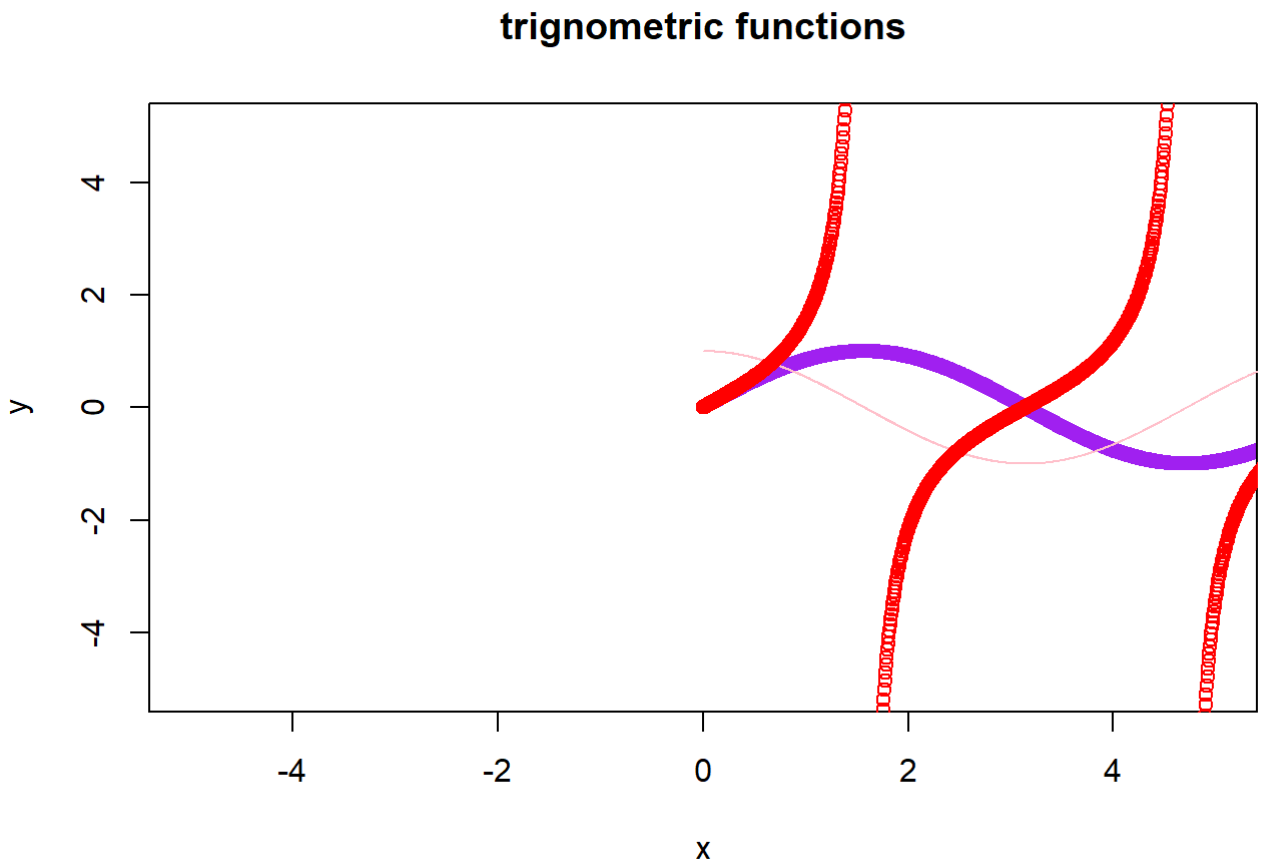
#different types of plots 1) scatter plot 2) pairs plot 3) pie chart 4) histogram 5) stem and leaf 6) bar chart 7) dot chart 8) box plot

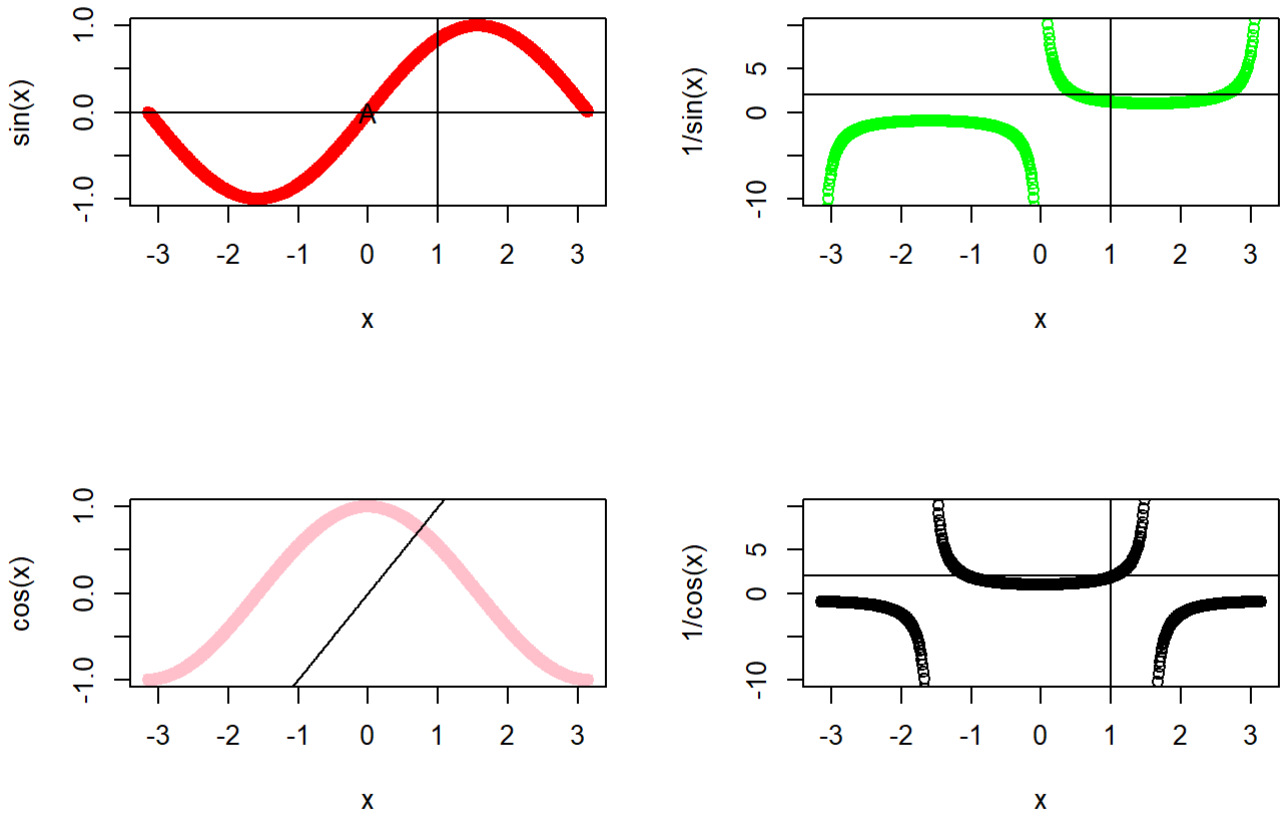
```
x=seq(0,2*pi, length=1000)
plot(x,sin(x),col="purple", ylab="y", lwd=1, main="trignometric functions", ylim=c(-5,5), xli
m=c(-5,5))
lines(x,cos(x),col="pink", lwd=1)
points(x,tan(x),col="red", lwd=1)
```



Ques. Plot 4 functions together in a 2*2 matrix margin

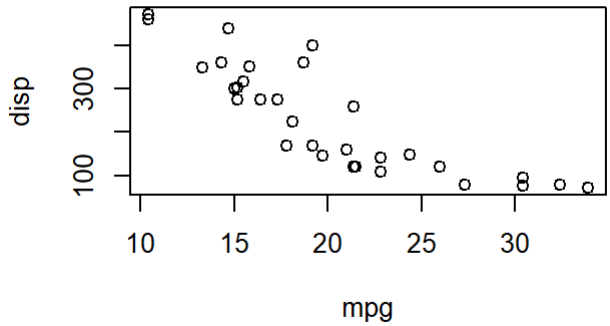
we have two options here, - par() - layout()

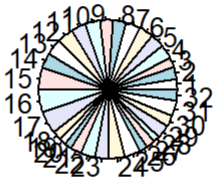
```
x=seq(-pi,pi,0.01)
par(mfcol=c(2,2))
plot(x,sin(x),col="red")
text(0,0,"A")
abline(h=0, v=1)

#use of abline- add the best fit line to scatter plot
#syntax: abline(a=intercept, b=slope, h=horizontal line, v=vertical line)

plot(x,cos(x),col="pink")
lines(x,x)

plot(x,1/sin(x),col="green",ylim=c(-10,10))
abline(h=2, v=1)
plot(x,1/cos(x),col="black",ylim=c(-10,10))
abline(h=2, v=1)
```

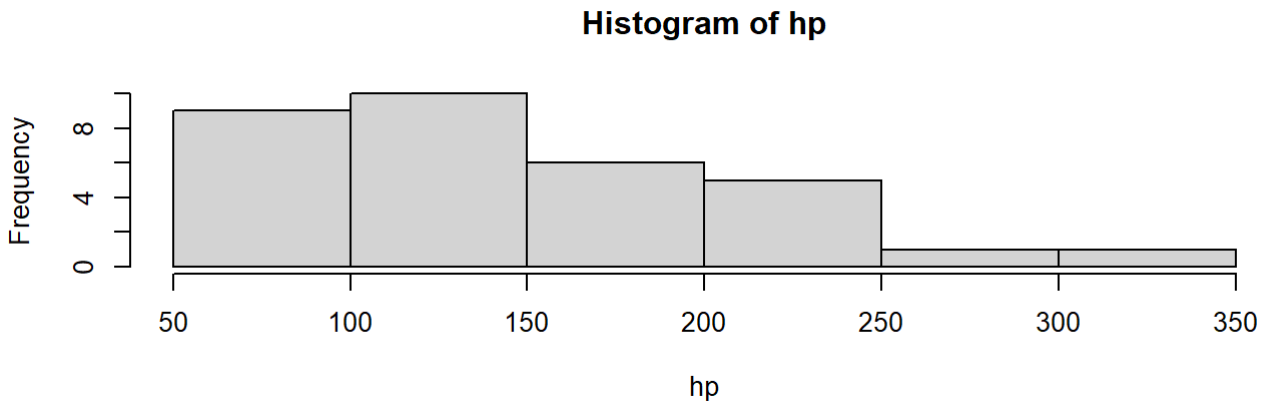


using layout() Ques. Plot 3 different graphs on a 2*2 matrix - layout(matrix(c(i1,i2,i3,…,in),m,n))

```
attach(mtcars)
layout(matrix(c(1,2,3,3),2,2, byrow=T))
plot(mpg,disp)
pie(wt)
hist(hp)
```



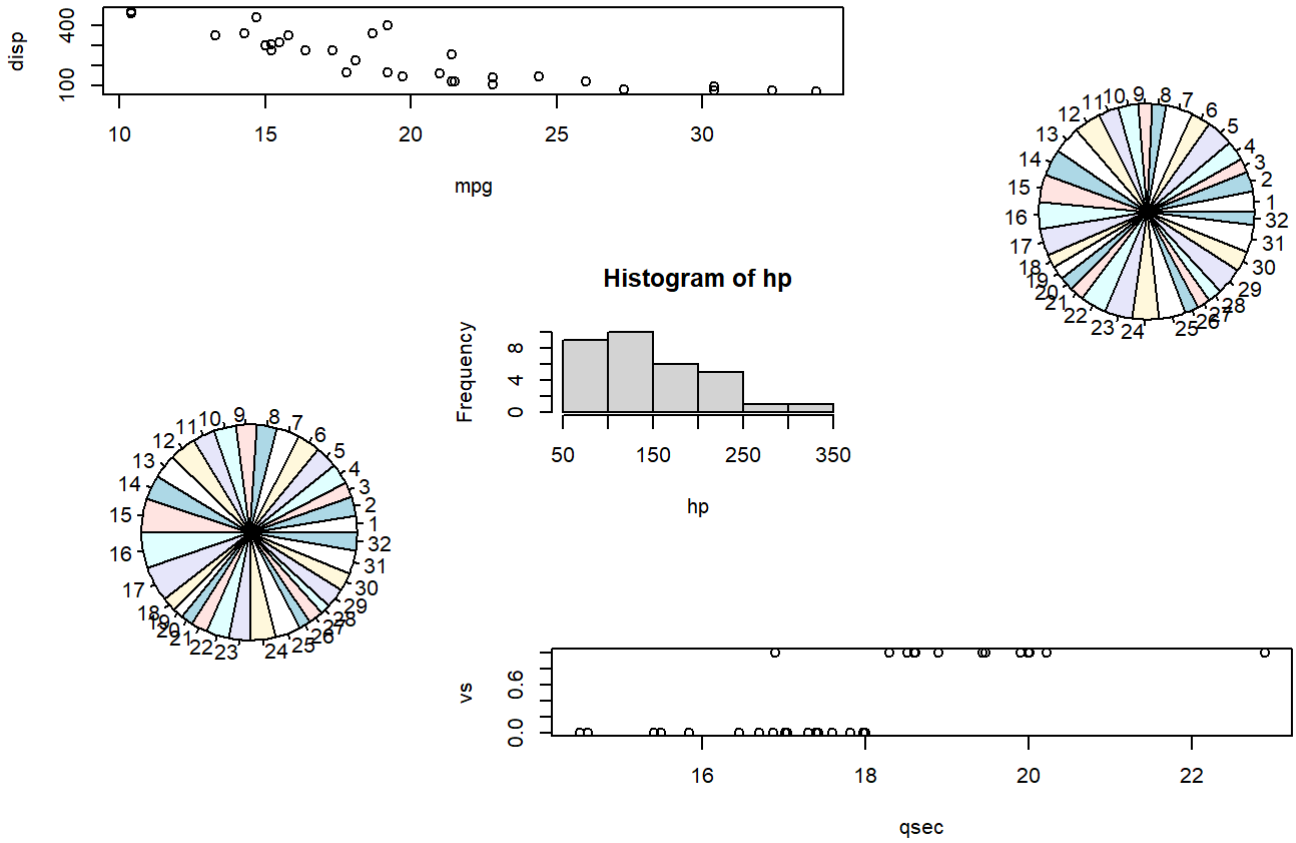





```
detach(mtcars)
```

3*3 LAYOUT

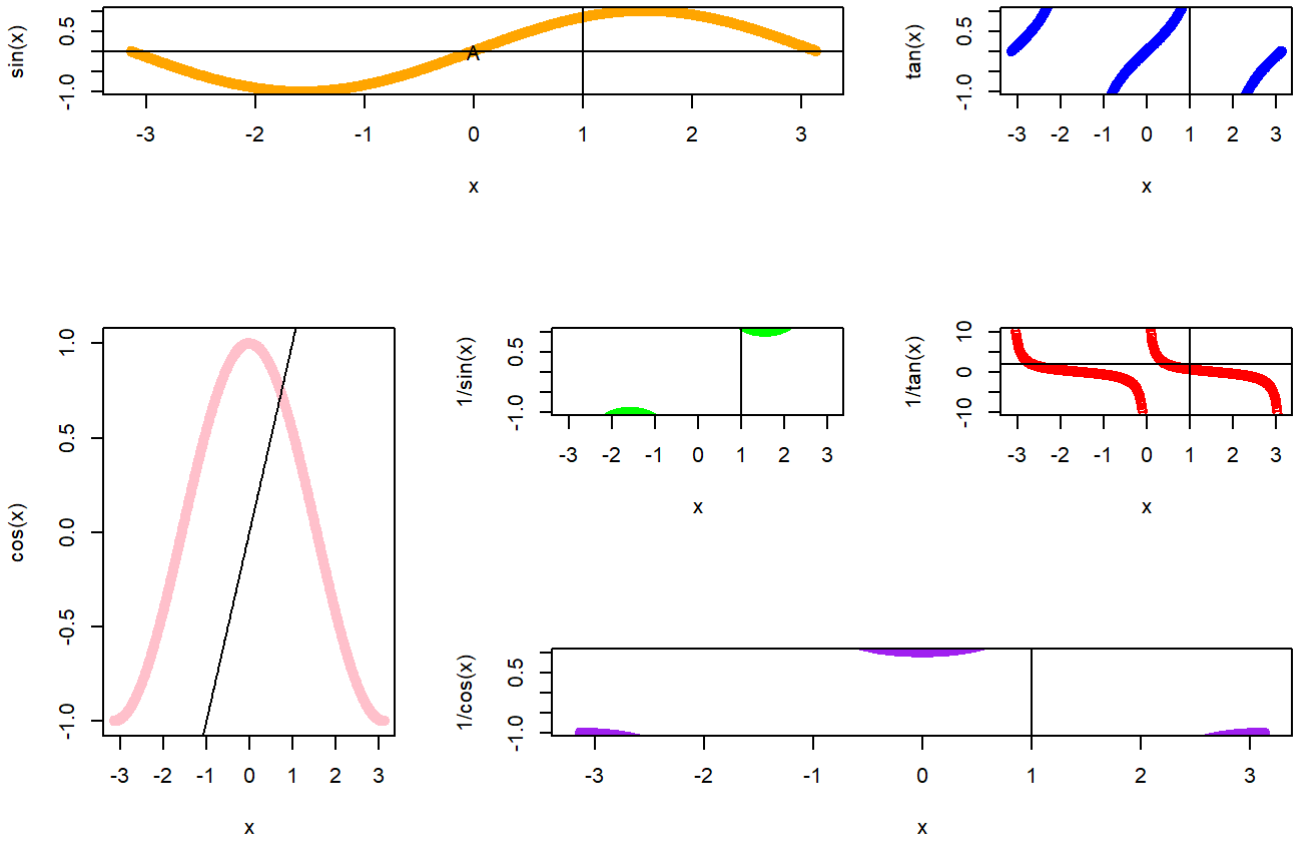
```
attach(mtcars)
layout(matrix(c(1,2,2,1,3,4,5,5,4),3,3))
plot(mpg,disp)
pie(wt)
hist(hp)
plot(qsec,vs)
pie(cyl)
```




```
detach(mtcars)
```

to plot six trignometric functions

```
layout(matrix(c(1,2,2,1,3,4,5,6,4),3,3))
plot(x,sin(x),col="orange")
text(0,0,"A")
abline(h=0, v=1)



plot(x,cos(x),col="pink")
lines(x,x)

plot(x,1/sin(x),col="green",ylim=c(-1,1))
abline(h=2, v=1)
plot(x,1/cos(x),col="purple",ylim=c(-1,1))
abline(h=2, v=1)

plot(x,tan(x),col="blue",ylim=c(-1,1))
abline(h=2, v=1)


plot(x,1/tan(x),col="red",ylim=c(-10,10))
abline(h=2, v=1)
```




```
x=seq(-1,1, length=10)
plot(x,x+1,pch=1:10,col=colors()[21:30],cex=1:10)
```