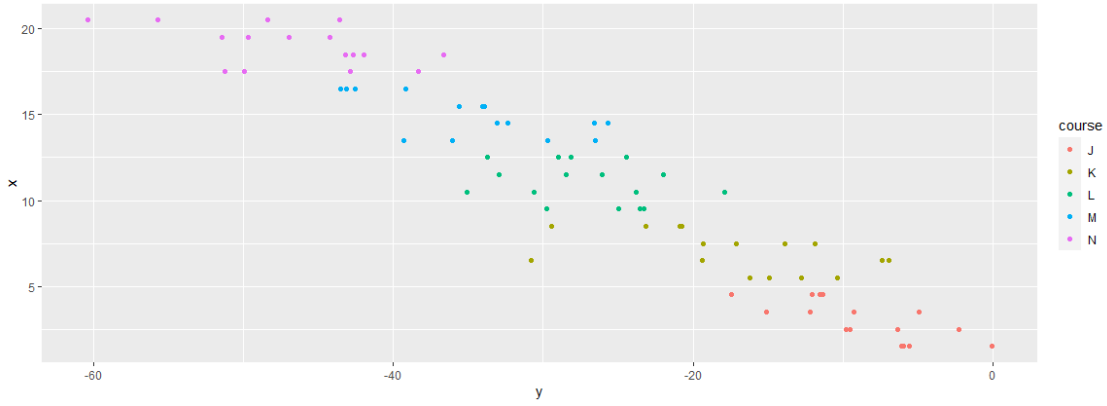
# HW_07

izd3

Use only commands & functions that are shown in the indicated chapter or prior chapters.

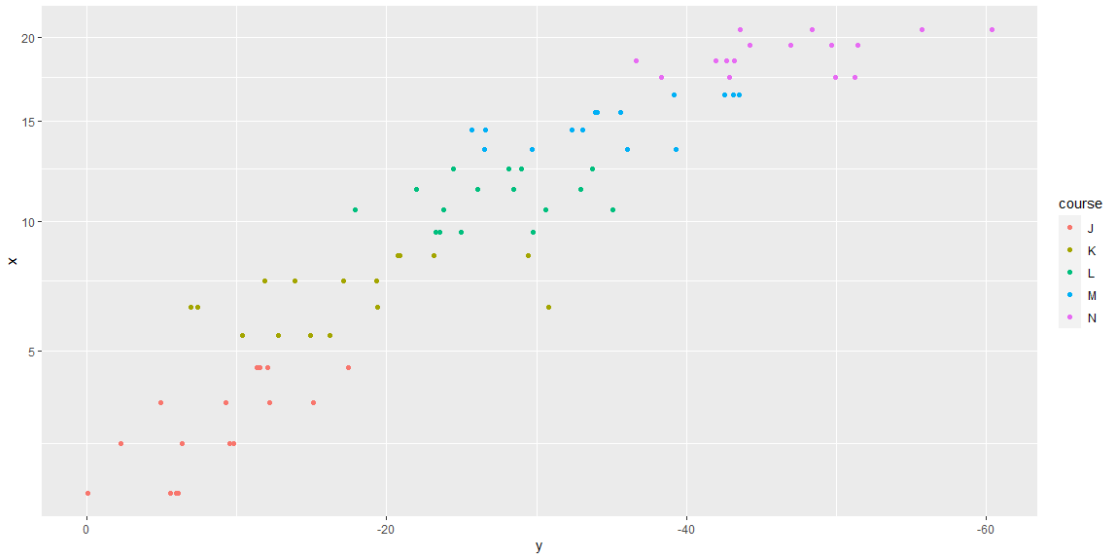
## Problem #01 - Chapter 29 Exercise #01D

```
# Show your work here
library(scales)
library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.2.3

coordGraph002+coord_fixed(ratio=8/7)
```



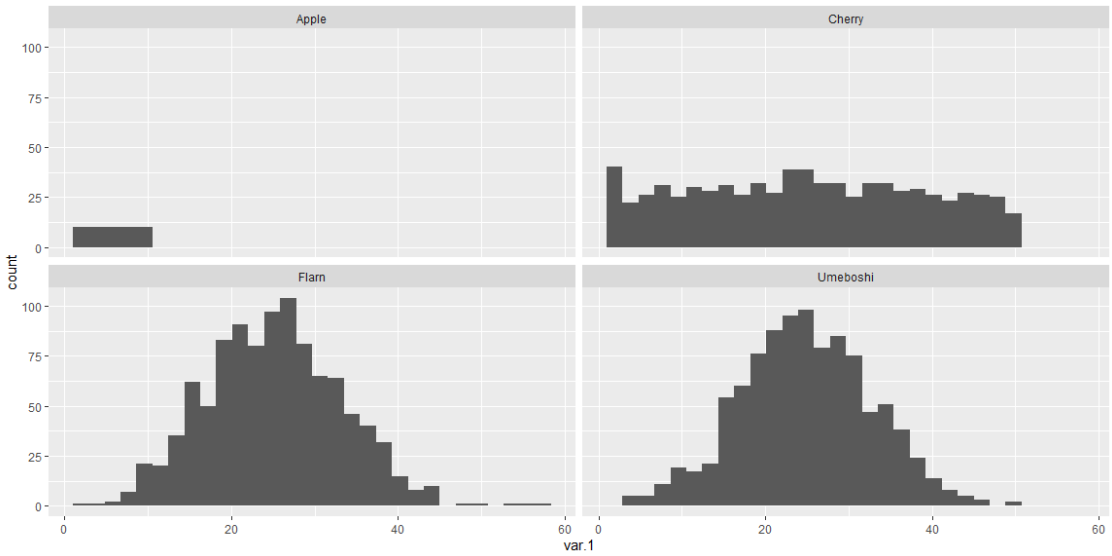
## Problem #02 - Chapter 29 Exercise #03D

```
# Show your work here

coordGraph002+coord_trans(y=sqrt_trans(),x=reverse_trans())
```



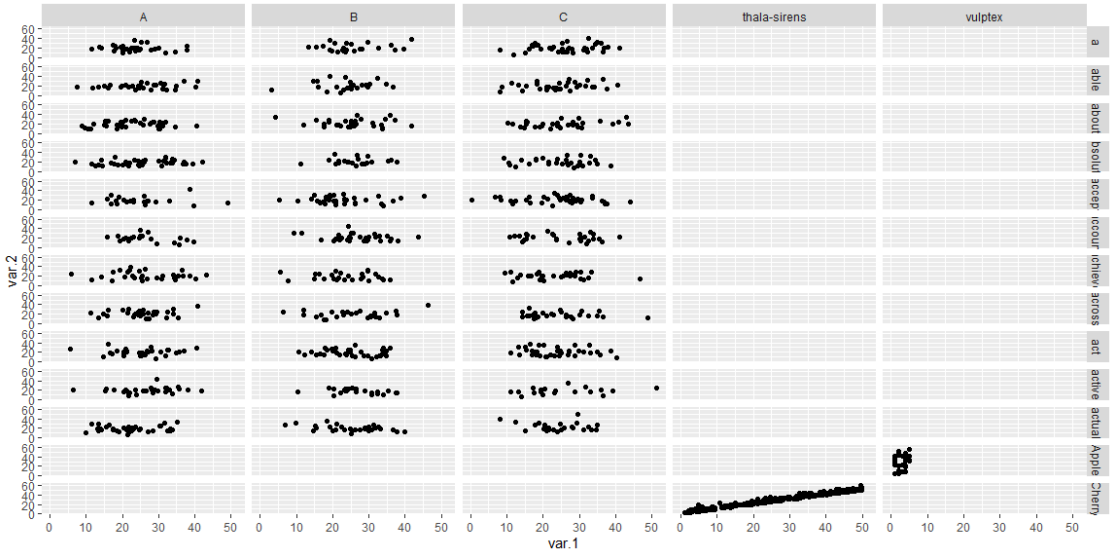
## Problem #03 - Chapter 30 Exercise #01D

```
# Show your work here
facetPlot004+facet_wrap(~ggplot005.dat$var.3)

## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



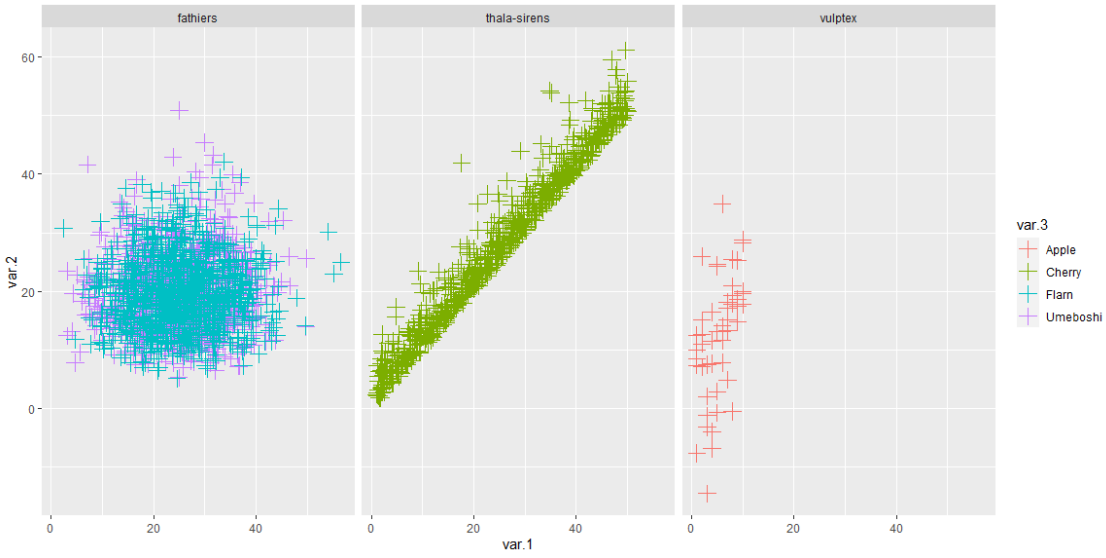
## Problem #04 - Chapter 30 Exercise #03D

```
# Show your work here
facetPlot006+facet_grid(ggplot006.dat$var.3~ggplot006.dat$var.4)
```



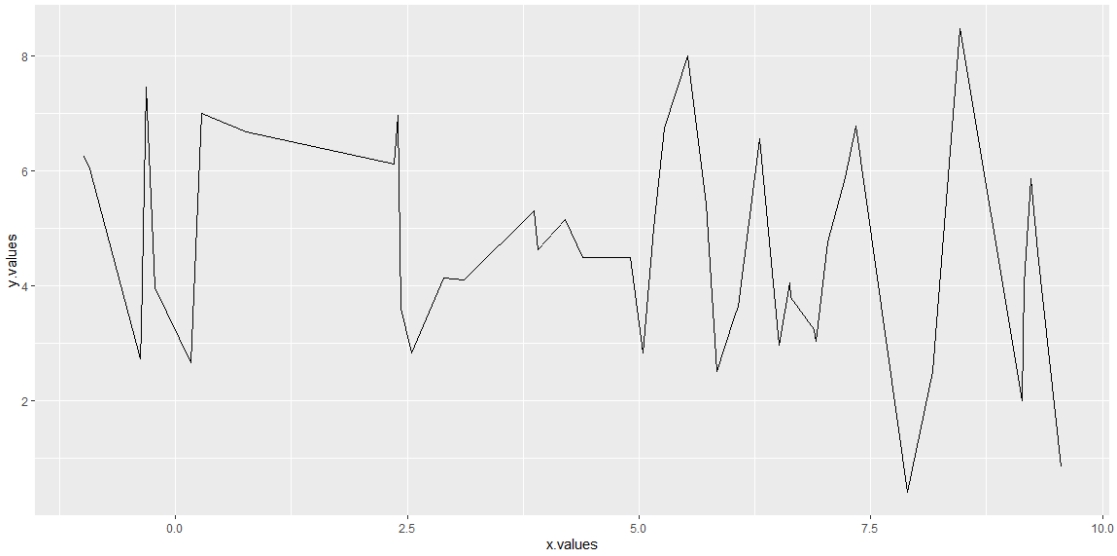
## Problem #05 - Chapter 30 Exercise #04A

```
# Show your work here
ggplot005.dat|>
  ggplot(aes(x=var.1,y=var.2,color=var.3))+
  geom_point(shape=3,size=4)+
  facet_wrap(~ggplot005.dat$var.4)
```



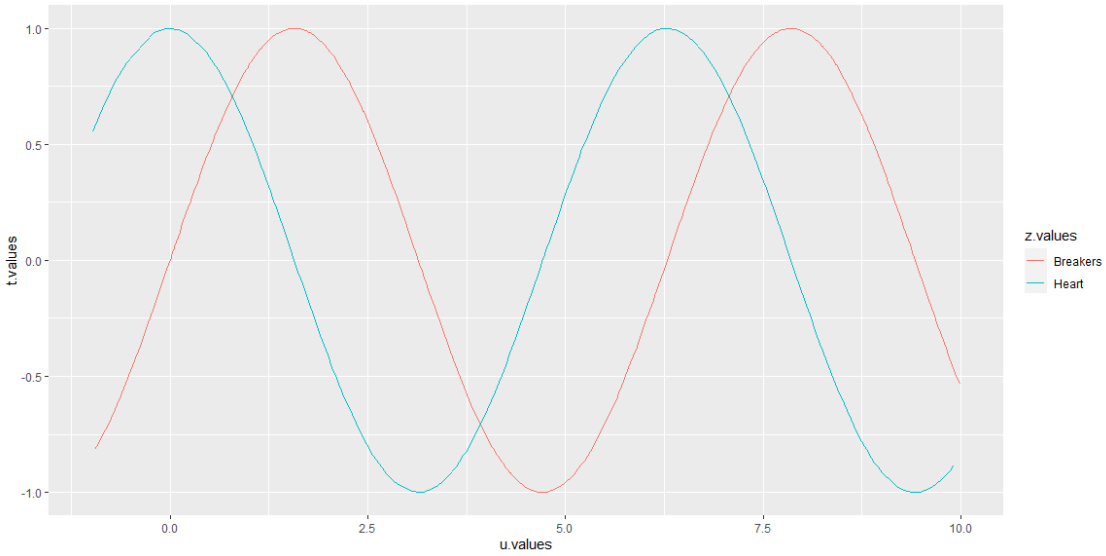
## Problem #06 - Chapter 31 Exercise #03A

```
# Show your work here
ggplot009.tib|>
  ggplot(aes(x=x.values,y=y.values))+geom_line()
```



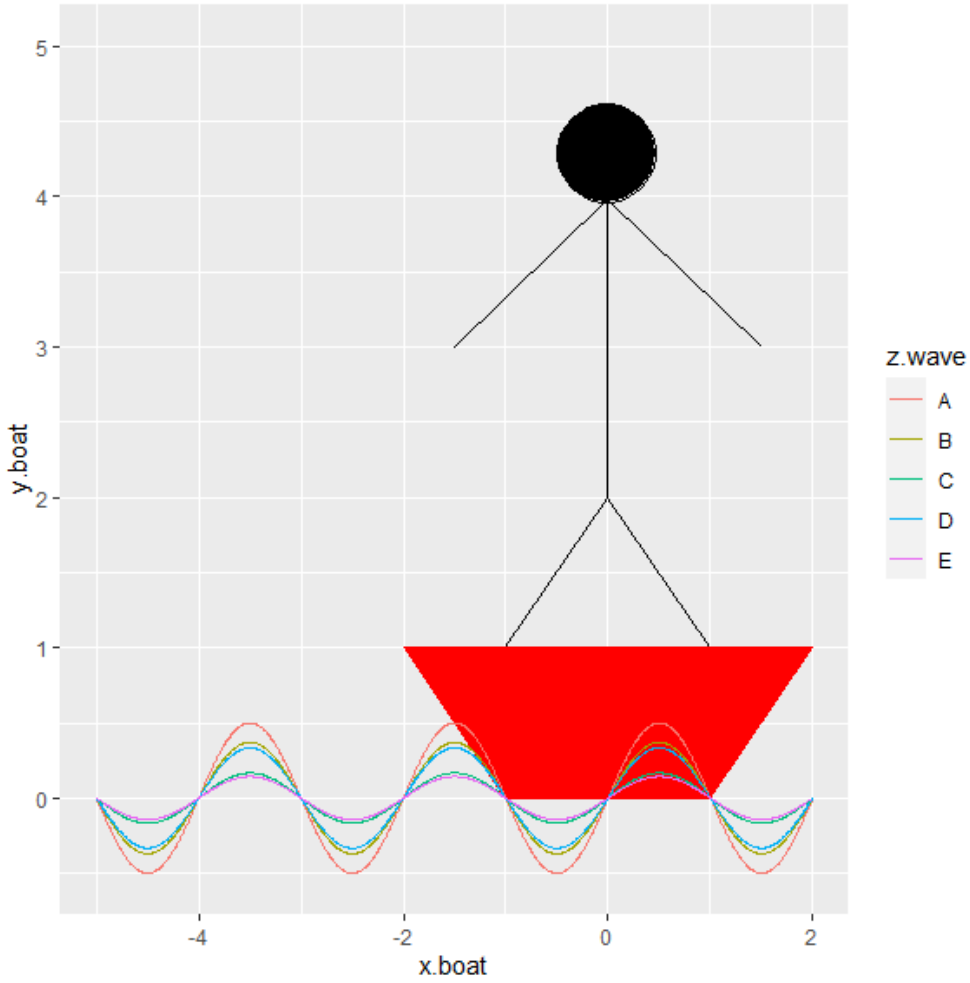
## Problem #07 - Chapter 31 Exercise #04D

```
# Show your work here
ggplot010.tib|>
  ggplot(aes(x=u.values,y=t.values,color=z.values))+geom_line()
```



## Problem #08 - Chapter 31 Exercise #06

```
# Show your work here
x<-c(-1,0,1,2,0,-2)
y<-c(0,0,0,1,1,1)
x_head<-c(0,0.29,0,-.29)
y_head<-c(4,4.5,5,4.5)
head_data<-data.frame(x.boat=x_head,y.boat=y_head)
boat_data<-data.frame(x.boat=x,y.boat=y)



x_values <- seq(-5, 2, length.out = 1000)  # 100

y_values<-
c(sinpi(x_values)/2,sinpi(x_values)/2.7,sinpi(x_values)/6,sinpi(x_values)/3,
            sinpi(x_values)/7)

x_values<-rep.int(x_values,times = 5)
z_values<-rep(c('A','B','C','D','E'),each=1000)

 wavy<-data.frame(x.boat=x_values,y.boat=y_values,z.wave=z_values)




ggplot()+geom_polygon(data=boat_data,mapping = aes(x=x.boat,y=y.boat),
                      color='red',fill='red')+
    geom_line(mapping = aes(x=0,y=2:4))+
    geom_line(mapping = aes(x=c(0,1),y=c(2,1)))+
    geom_line(mapping = aes(x=c(0,-1),y=c(2,1)))+
    geom_line(mapping = aes(x=c(0,1.5),y=c(3.98,3)))+
    geom_line(mapping = aes(x=c(0,-1.5),y=c(3.98,3)))+
    geom_point(aes(x=0,y=4.28),size=20)+
    geom_line(data=wavy,mapping = aes(x=x.boat,y=y.boat,color=z.wave))+
    geom_hline(yintercept = 5,color='white')
```


5
4
3
2
1
0
y.boat
-4
-2
0
2
x.boat
z.wave
A
B
C
D
E