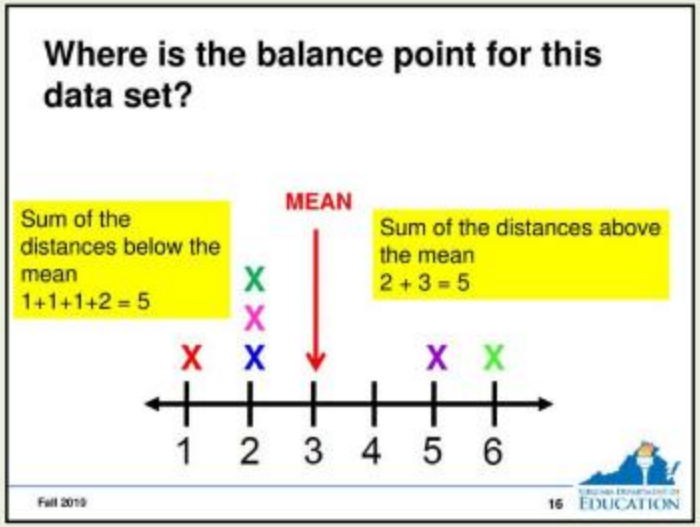
HW 7 Mean as a balance point.

- **Apply the concept of Moment to find the mean of data set.**
- **Create the function, my.mean, using the sum of differences always be zero at the Mean point.**
- **Use your function to find the mean of this data set: 4.9, 6.8, 1.3, 7.4, 2.5 and test your result with the built-in mean( ) at two decimal precision.**

<u>Hint</u>: study the below picture which data = 1, 2, 2, 2, 5, 6 at mean = 3.



R Code Example

- Sample data = 2, 7, 9 so the Mean must be 6.

```r
# Modify this code to use with general data
x = c(2,7,9)
mx = seq(2,9)
diff=0

for (i in 1:8){
  sum.diff = 0

  for (j in 1:3) {
    diff[i] = x[j]-mx[i]
    sum.diff = sum.diff+diff[i]
    }

  cat("sum.diff =",sum.diff,"\n",
      "Mean =",mx[i],"\n","\n")
}
```

- Modify the above code making the function to find Mean in general data.
- When sum.diff = 0 that “mx” value will be the Mean. Loop must stop and show the mx value.
- In general data, the Mean is not only integer so the trial range of mx value should be in decimal places.

```
mx = seq(min,max,by=0.01)      # trial values increase by 0.01 from Min to Max
round(sum.diff,digits=2)       # set the sum in two decimal places ready for
                               # comparing with the mx value
```