1.

a. X bar= $\frac{31.6+29.3+32.9+24.8+28.8+26.1+20.9+17.7+33.7+25.1}{10}=23.7$, s= $\sqrt{\frac{237.2}{9}}$

=5.18

b. X bar decreases by a factor of .3937 and so does the s value.

c. When multiplying by α both x bar and s increase by the factor of α. But when adding β only x bar increases, s remains unchanged.

2.

```
532 | 9
533 |
534 | 2
535 | 47
536 | 6
537 | 5678
538 | 12345778888
539 | 016999
540 | 11166677889
541 | 123666688
542 | 0011222357899
543 | 01111556
544 | 00012455678
545 | 233447899
546 | 23569
547 | 357
548 | 11257
```

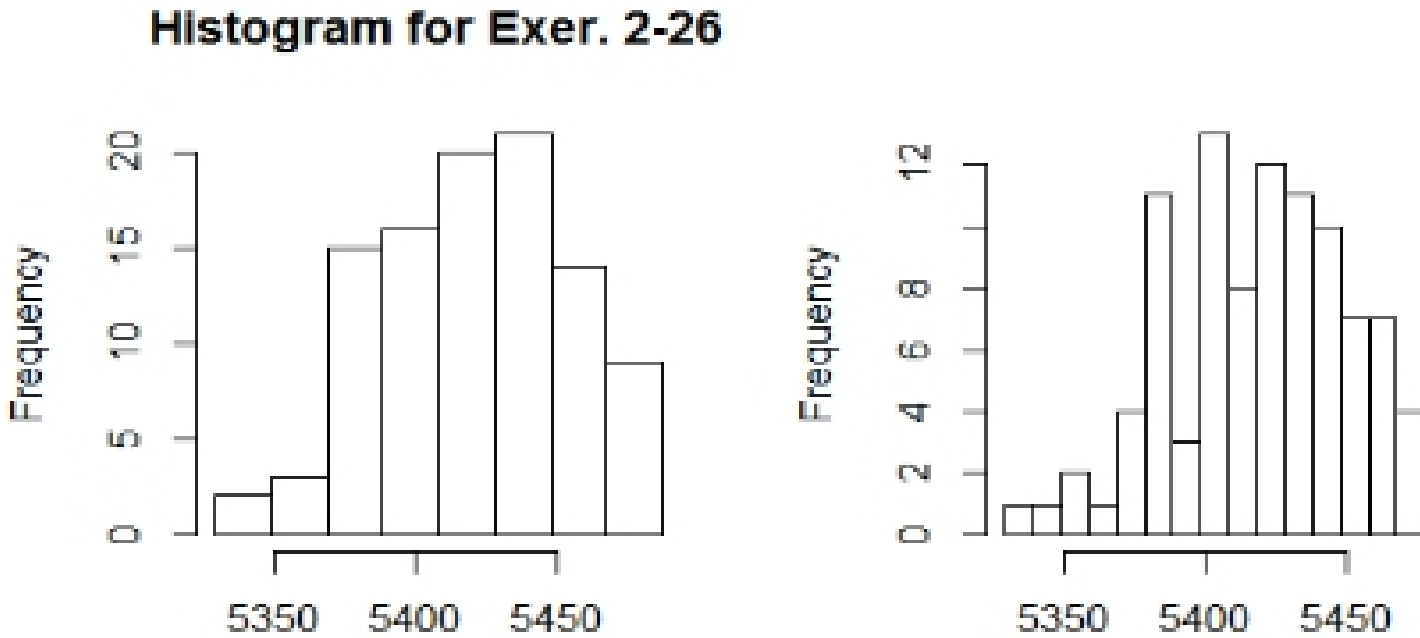
- Most of the data values lie between 5381 and 5459 and the median is somewhere between 5420 and 5429 so I would say this data is mostly symmetric. The range of data is 5329 to 5487. 5329 seems to be an outlier for sure.

3.

```
 4 |
 5 | 0
 5 | 66
 6 |
 6 | 5669
 7 | 013
 7 | 5788
 8 | 1124
 8 | 6778
 9 | 01122444
 9 | 55666
```

- Looking at the data it's obvious that the most of the data lies between 650 and 960 and the median is somewhere around 800 to 840. With that, the overall range is from 490 to 960 meaning the data appears to be left skewed. 50 and 56 seem like they may be outliers in this plot as well.

4.



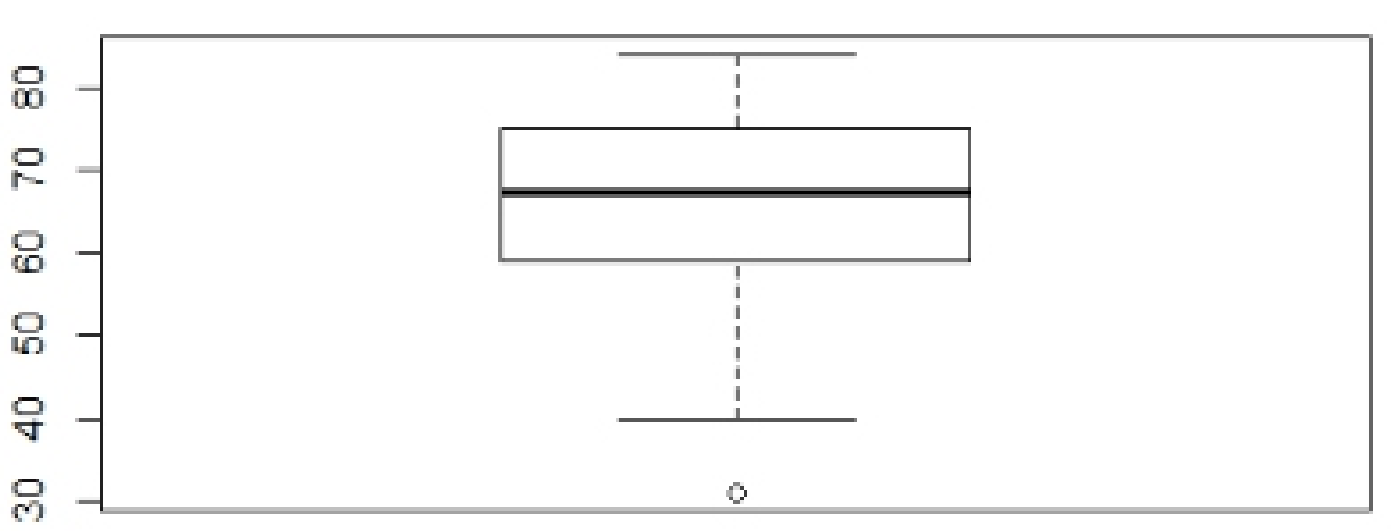
5.

a. x bar= 65.86 s= $\sqrt{(\frac{51743056}{35})}$ =12.16

b. q1= $58+(.25)(60-58)$ = 58.5 q3= $75+(.75)(75-75)$ = 75

c. median= $\frac{67+68}{2}$ = 67.5

e.



- The value of the outlier is 31since it is the only point outside of the whiskers, it is the only outlier.