Experimental Design and Data Analysis: Assignment 2

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1 Exercise 1

Exercise 1 stuff...

2 Exercise 2

I needed to put the light1882 on 1 line, else it can't be imported as a table, because it would not have a full last line. See Fig:1 for the histograms of the two datasets.

The 95% confidence interval of the mean of Light1879 is 836.7226 - 868.0774
The 95% confidence interval of the mean of Light1879 is 712.4417 - 799.9931
The 95% confidence interval of the median of Light1879 is 834.5142 - 865.4858
The 95% confidence interval of the median of Light1879 is 730.2243 - 817.7757

3 Exercise 3

Looking at the histogram of the data, see Fig:2 , it is clear that it is not normally distributed. So the t-test should not be used. Instead of this, we use the sign-test.

```
        One−sample Sign−Test

    data :   data
    s = 36 , p−value = 0.155
    alternative hypothesis : true median is not equal to 35
    95 percent confidence interval :
     32.00000  56.07713
    sample estimates :
    median of x
            42
```
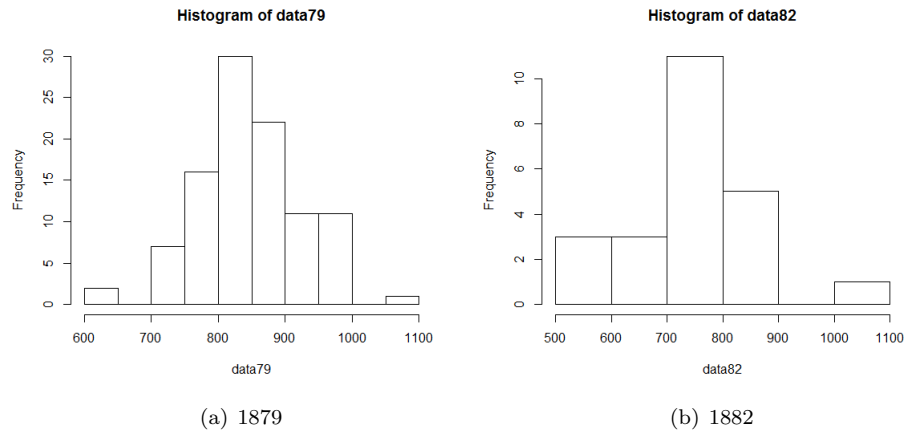
(a) 1879

(b) 1882

Figure 1: Histograms of the datasets Light1879 and Light1882

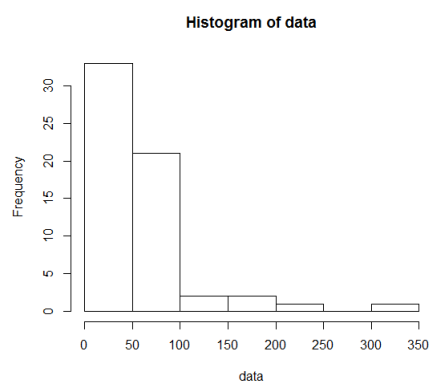|	Conf.Level	L.E.**pt**	U.E.**pt**
Lower Achieved CI	0.9481	32	56.0000
Interpolated CI	0.9500	32	56.0771
Upper Achieved CI	0.9727	32	57.0000

4   Exercise 4

Exercise 4 stuff...

Histogram of data

Figure 2: Histogram of the dataset klm