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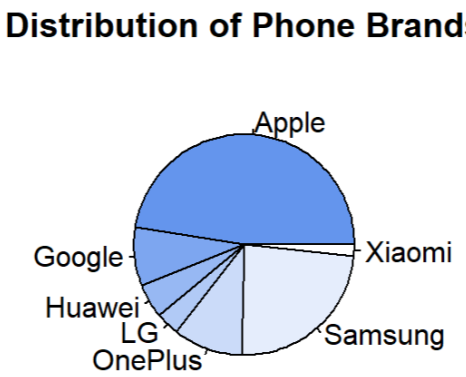
Lab 1

Part 1

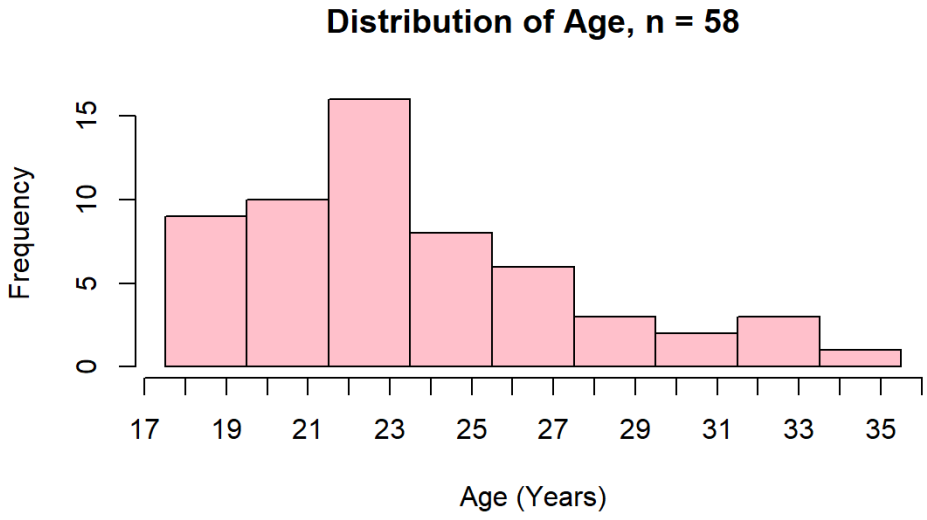
a.



b. The proportion ($\hat{p} = \frac{x}{n}$) of all the iPhone users is $\hat{p} = \frac{28}{59} = 0.4745763$. This is not a good estimate of the proportion of all BCIT students because the sample data collected is from a single cohort of CIT program students. The CIT students are not representative of the all the different types of students in all the different programs that exist in BCIT.

Part 2

a.



b.

Class Limits	Upper Boundary	Class Mark	Frequency	Relative Frequency (%)
18-19	19.5	18.5	9	15.25
20-21	21.5	20.5	10	16.95
22-23	23.5	22.5	16	27.12

24-25	25.5	24.5	8	13.56
26-27	27.5	26.5	6	10.17
28-29	29.5	28.5	3	5.08
30-31	31.5	30.5	2	3.39
32-33	33.5	32.5	3	5.08
34-35	35.5	34.5	1	1.69

c. There are 39 students in the sample size that are 22 years or older. Therefore the probability of any randomly picked student being 22 years or older will be $\frac{39}{58} = 67.24$. Or 67.2%.

Part 3

a.

Data	**Siblings**	**Income Goal**
Sample size (n)	59	54
Sample mean ($\bar{x}$)	1.355932	$ 126,158.6
Median (Q_2)	1	$ 100,000
Mode	1	$ 100,000
Range	8	730000
Sample standard deviation(s)	1.323041	122793.2
Variance (s^2)	1.750438	15078170319
Skewness (Sk)	0.8070773	0.6390894
30th percentile	1	$ 80,000
IQR	1	$ 37,500