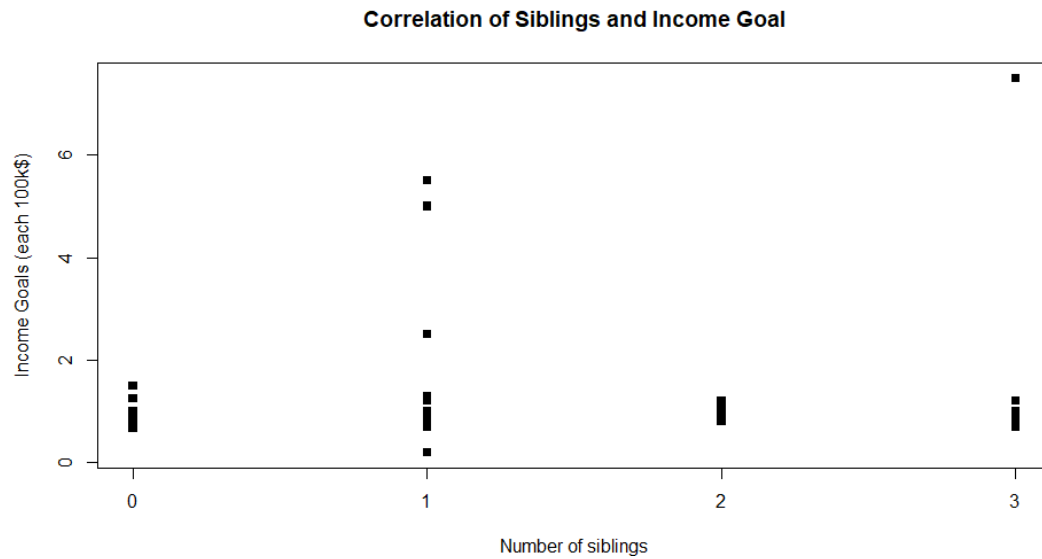


Lab 10

1. a.



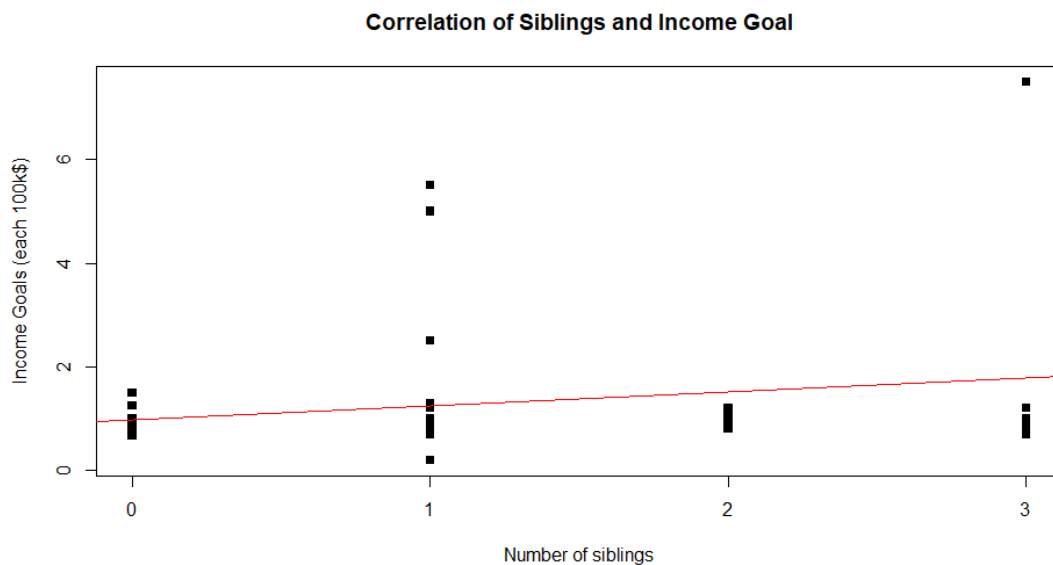
b.

$r = 0.1934761$

P.value = 0.1782252

This indicates that the results are not statistically significant since the p.value is above significance level.

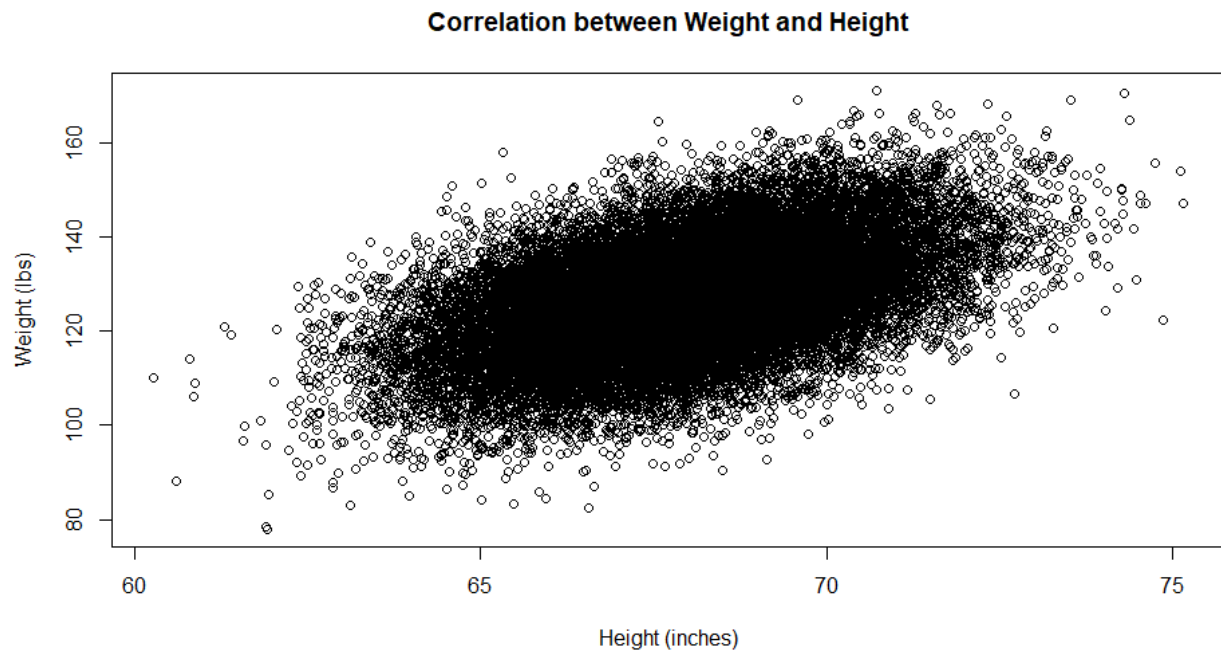
c.



d.

$$\hat{Y} = a + b \cdot x = 97902 + 4(26830) = 205222$$

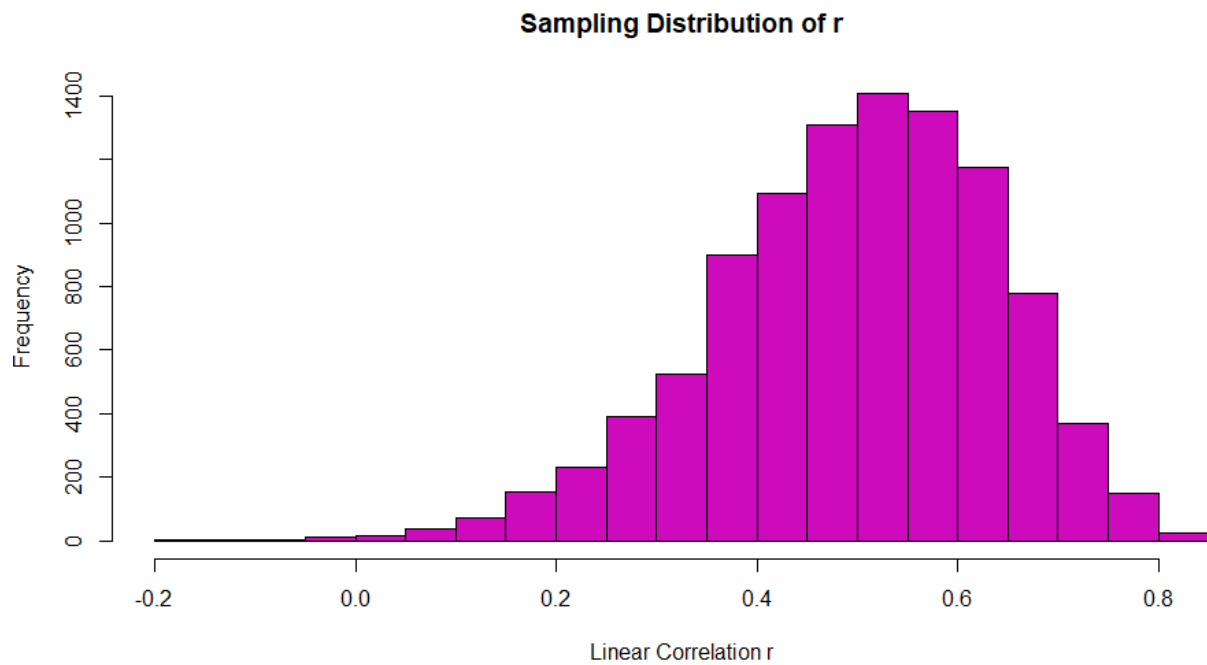
2. a.



b.

$$\text{Spearman's Rho (correlation coefficient)} = 0.5028585$$

c.



d.

0.998 = 99.8% of samples indicate a positive linear correlation

e.

0.8365 = 83.65% of samples have a non-zero population correlation

3.

a.

```
call:
lm(formula = Y.3 ~ x1 + x2 + x3)
```

Coefficients:

(Intercept)	x1	x2	x3
135225	9559	-1670	40361

b.

In the event that the age increases by one year, the predicted income goal will increase by \$9558.99

c.

23-year-old student with a height of 147.5 cm and no siblings has an income goal of 108761.