1.

1. ,
2. 7.777, 12.963)
3. Standard deviation :

5.87, 14.87)

Since , the null hypothesis is rejected. That is,

Since , we cannot reject the null hypothesis. That is,

1. is not rejected when

when

2.

1. (1) : t.test (2) : a (3) : b
2. vs

p-value : 0.6956/2=0.3478

Since p-value(=0.3478) is larger than 0.05, the null hypothesis is not rejected.

1. (-6.513393, 9.488393)

3.

1. , 13.58+0.0307

y = 33.53 - 0.0307x

1. r =
2. 33.53+(-0.030712.347

4.

1. (1) : lm (2) : y (3) : x
2. Y = -0.93651+1.71825x
3. Y = -0.93651+1.71825
4. Multiple R-squared: 0.9894. 98.94% of the variance is explained by the regression line.
5. 1.55, 1.906)
6. , p-value : 3.77. Since p-value<0.05, we can conclude that 0

5.

1. vs are different.
2. (1) : 2 (2) : 6 (3) : 86052.83 (4) : 96304-86052.83=10251.17

(5) : 86052.83/2=43026.42, (6) 10251.17/6 = 1708.528 (7) : 43026.42/1708.528=25.183

d) Since F=25.183>, the null hypothesis is rejected.

6.

1. Since , the coughing is not independent of the treatment.

7.

1. The joint density is

Take logarithm,

1. =

the method of moments :

the method of maximum likelihood :