Assignment 6

1. Do you believe that the average tail length of male baby rabbits is longer than that of female baby rabbits? Explain your answer.

2. A random sample of 100 male baby rabbits was taken, and their tail lengths were measured. The sample mean was 5 cm with a standard deviation of 1.5 cm. Test the null hypothesis that there is no difference in tail length between male and female baby rabbits at a significance level of 0.05.

3. A random sample of 100 female baby rabbits was taken, and their tail lengths were measured. The sample mean was 4 cm with a standard deviation of 1.2 cm. Test the null hypothesis that there is no difference in tail length between male and female baby rabbits at a significance level of 0.05.

4. A random sample of 150 baby rabbits was taken, and their tail lengths were measured. The sample mean was 4.5 cm with a standard deviation of 1.8 cm. Test the hypothesis that the mean tail length of baby rabbits is greater than 4 cm at a significance level of 0.05.

5. A random sample of 200 baby rabbits was taken, and their tail lengths were measured. The sample mean was 4.8 cm with a standard deviation of 2.0 cm. Test the hypothesis that the mean tail length of baby rabbits is greater than 5 cm at a significance level of 0.05.

6. A random sample of 250 baby rabbits was taken, and their tail lengths were measured. The sample mean was 5.2 cm with a standard deviation of 2.3 cm. Test the hypothesis that the mean tail length of baby rabbits is greater than 5.5 cm at a significance level of 0.05.

7. A random sample of 300 baby rabbits was taken, and their tail lengths were measured. The sample mean was 5.5 cm with a standard deviation of 2.5 cm. Test the hypothesis that the mean tail length of baby rabbits is greater than 6 cm at a significance level of 0.05.