1. The health commissioner of city B postulated that the mean diastolic blood pressure (DBP) in a population of patients diagnosed as hypertensive was 100 mm Hg. Wishing to test this null hypothesis, a random sample of 11 subjects was drawn from this target population.

The results were as follows (DBP in mm Hg):

96, 114, 125, 105, 97, 96, 131, 117, 107, 111, 123

Using the attached SAS file( code 1) , perform a one-sample t-test

Assume the sample was drawn from a normally distributed population.

Use α = 0.05 (two-tailed) and assume 80% power.

a) State the null and alternative hypotheses.

b) List the critical value

c) Replacing the response lines, report your decision **(reject Ho and accept Ha OR fail to reject Ho)** based on the critical value, P-value, and 95% confidence interval for the population mean:

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d) If the decision was to fail to reject Ho, can Ho be accepted?

2. A study was conducted among children aged 8-10 to determine if resting heart rate differed between males and females. Independent samples of 8 females and 8 males were selected from the two respective populations.

The results were as follows (heart rates in beats/min):

Females 71, 80, 80, 75, 78, 77, 81, 82

Males 71, 81, 79, 74, 73, 78, 71, 74

Using the attached SAS file( code2) , perform a two-sample t-test.

Assume normality and equal variance. Use α = 0.05 (two-tailed) and assume 80% power.

1. State the null and alternative hypotheses.

1. List the critical value.

c) Replacing the response lines, report your decision **(reject Ho and accept Ha OR fail to reject Ho)** based on the critical value, P-value, and 95% confidence interval for the difference between the population means.

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d) If the decision was to fail to reject Ho, can Ho be accepted?