Qn 4

A sample of 10 fish were caught at lake A and their PCB concentrations were measured using a certain technique. The resulting data in parts per million were

Lake A: 11.5, 10.8, 11.6, 9.4, 12.4, 11.4, 12.2, 11, 10.6, 10.8

In addition, a sample of 8 fish were caught at lake B and their levels of PCB were measured by a different technique than that used at lake A. The resultant data were

Lake B: 11.8, 12.6, 12.2, 12.5, 11.7, 12.1, 10.4, 12.6

If it is known that the measuring technique used at lake A has a variance of 0.09 whereas the one used at lake B has a variance of 0.16, could you reject (at the 5% level of significance) a claim that the two lakes are equally contaminated?

Qn 5

The viscosity of two different brands of car oil is measured and the following data resulted: Brand 1 10.62 10.58 10.33 10.72 10.44 10.74

Brand 2 10.50 10.52 10.58 10.62 10.55 10.51 10.53

Test the hypothesis (at 5% level of significance) that the mean viscosity of the two brands is equal, assuming that the population have normal distributions with equal variances.