

A scientist is investigating the masses of a particular type of fish found in lakes A and B . He chooses a random sample of 10 fish of this type from lake A and records their masses, x kg, as follows.

2.1 1.8 0.9 3.0 2.4 2.6 1.8 2.2 1.9 2.5

The scientist also chooses a random sample of 12 fish of this type from lake B , but he only has a summary of their masses, y kg, as follows.

$$\sum y = 24.48 \quad \sum y^2 = 53.75$$

Test at the 10% significance level whether the mean mass of fish of this type in lake A is greater than the mean mass of fish of this type in lake B . You should state any assumptions that you need to make for the test to be valid. [10]