

Farmer A grows apples of a certain variety. Each tree produces 14.8 kg of apples, on average, per year. Farmer B grows apples of the same variety and claims that his apple trees produce a higher mass of apples per year than Farmer A 's trees. The masses of apples from Farmer B 's trees may be assumed to be normally distributed.

A random sample of 10 trees from Farmer B is chosen. The masses, x kg, of apples produced in a year are summarised as follows.

$$\sum x = 152.0 \quad \sum x^2 = 2313.0$$

Test, at the 5% significance level, whether Farmer B 's claim is justified.

[6]