

Jasmine is researching the heights of pine trees in forests in two regions A and B . She chooses a random sample of 50 pine trees in region A and records their heights, x m. She also chooses a random sample of 60 pine trees in region B and records their heights, y m. Her results are summarised as follows.

$$\Sigma x = 1625 \quad \Sigma x^2 = 53200 \quad \Sigma y = 1854 \quad \Sigma y^2 = 57900$$

Find a 95% confidence interval for the difference between the population mean heights of pine trees in regions A and B . [7]