Ellie is investigating the heights of two types of beech tree, A and B, in a certain region. She has chosen a random sample of 60 beech trees of type A in the region, recorded their heights, x m, and calculated unbiased estimates for the population mean and population variance as 35.6 m and 4.95 m^2 respectively.

Ellie also chooses a random sample of 50 beech trees of type B in the region and records their heights, y m. Her results are summarised as follows.

$$\sum y = 1654 \qquad \sum y^2 = 54\,850$$

Find a 95% confidence interval for the difference between the population mean heights of type A and type B beech trees in the region. [6]