

A random sample of 8 elephants from region  $A$  is taken and their weights,  $x$  tonnes, are recorded. (1 tonne = 1000 kg.) The results are summarised as follows.

$$\Sigma x = 32.4 \quad \Sigma x^2 = 131.82$$

A random sample of 10 elephants from region  $B$  is taken. Their weights give a sample mean of 3.78 tonnes and an unbiased variance estimate of 0.1555 tonnes<sup>2</sup>. The distributions of the weights of elephants in regions  $A$  and  $B$  are both assumed to be normal with the same population variance. Test at the 10% significance level whether the mean weight of elephants in region  $A$  is the same as the mean weight of elephants in region  $B$ . [9]