

The times taken by members of a large quiz club to complete a challenge have a normal distribution with mean μ minutes. The times, x minutes, are recorded for a random sample of 8 members of the club. The results are summarised as follows, where \bar{x} is the sample mean.

$$\bar{x} = 33.8 \quad \Sigma(x - \bar{x})^2 = 94.5$$

Find a 95% confidence interval for μ .

[4]