AQA – Confidence intervals – AS Further Mathematics Statistics

1. June/2021/Paper_7366/2S/No.4a, b

    The distance a particular football player runs in a match is modelled by a normal distribution with standard deviation 0.3 kilometres.

    A random sample of n matches is taken.

    The distance the player runs in this sample of matches has mean 10.8 kilometres.

    The sample is used to construct a 93% confidence interval for the mean, of width 0.0543 kilometres, correct to four decimal places.

    (a)   Find the value of n

    [3 marks]

    (b)   Find the 93% confidence interval for the mean, giving the limits to three decimal places.
    [1 mark]