

Normal Distribution - Overview (10/6/21)

Q1 [12 marks]

Suppose that the heights (in cm) of adult males in the UK are distributed $N(174,49)$.

(i) Assuming that there are 2.5 cm to an inch, what proportion of adult males in the UK are over 6 ft? Give your answer to 1dp.

[3 marks]

(ii) In another country, the heights of adult males are distributed Normally, such that 10% are over 6 ft and 5% are under 5ft. Find the mean and variance of the distribution. Give your answers to 1dp. [9 marks]

Q2 [Problem/Y2/H]

Show that 1 standard deviation to either side of the mean of the Normal distribution occurs at the point of inflexion of the Normal curve.