

7. Suppose that the IQ scores of the people in a population can be modelled by a normal distribution with a mean of 100 and a standard deviation of 15.

MARKS

10
(2, 5, 3)

- (a) Find the proportion of the population with IQ scores of 130 and greater.
- (b) Find the proportion of the population with IQ scores between 90 and 120. Explain briefly if it matters whether the end points (90 and 120) of this interval are *included* or *excluded* from the probability calculation.
- (c) Find the IQ score that represents the 99th percentile of the distribution of IQ scores in this population.

(a)

 (a)
Proportion

(b)

 (b)
Proportion

(c)

 (c)
99th percentile