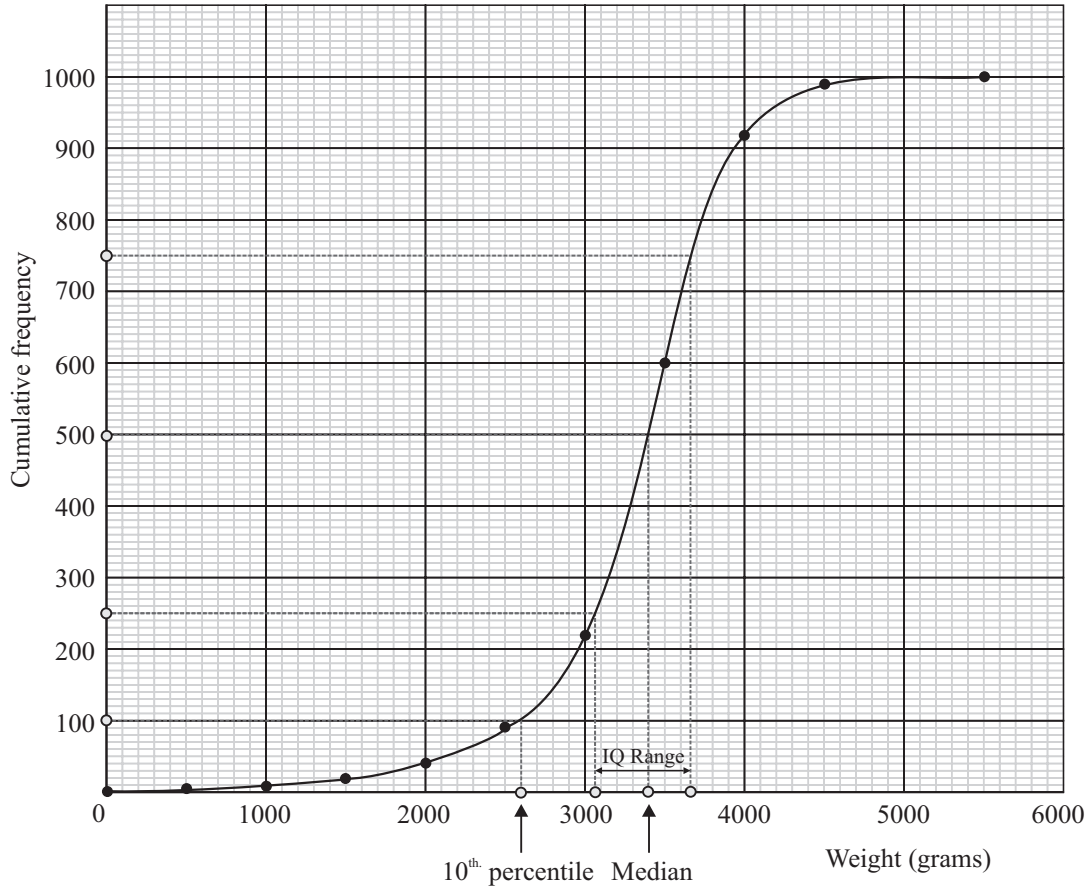# Sample Paper 7: Paper 2

Question 5 (25 marks)

Question 5 (a)

Median = 3400 g

Interquartile range = 3670 – 3060 = 610 g

Question 5 (b)

Range of weights below the 10[th.] percentile = 0–2600 g

Question 5 (c) (i)

A. $n = 12$, $P(\text{Need special care}) = 0.15$, $P(\text{Do not need special care}) = 0.85$,

$P(2 \text{ need special care}) = {}^{12}C_2(0.15)^2(0.85)^{10} = 0.2924$

B. $P(\text{More than two need special care}) = 1 - P(\text{Two or one or none need special care})$

$= 1 - \{0.2924 + {}^{12}C_1(0.15)^1(0.85)^{11} + {}^{12}C_0(0.15)^0(0.85)^{12}\}$

$= 0.2641$

Question 5 (c) (ii)

$E = 100 \times 0.2641 = 26.41$ occasions