

1. (a)

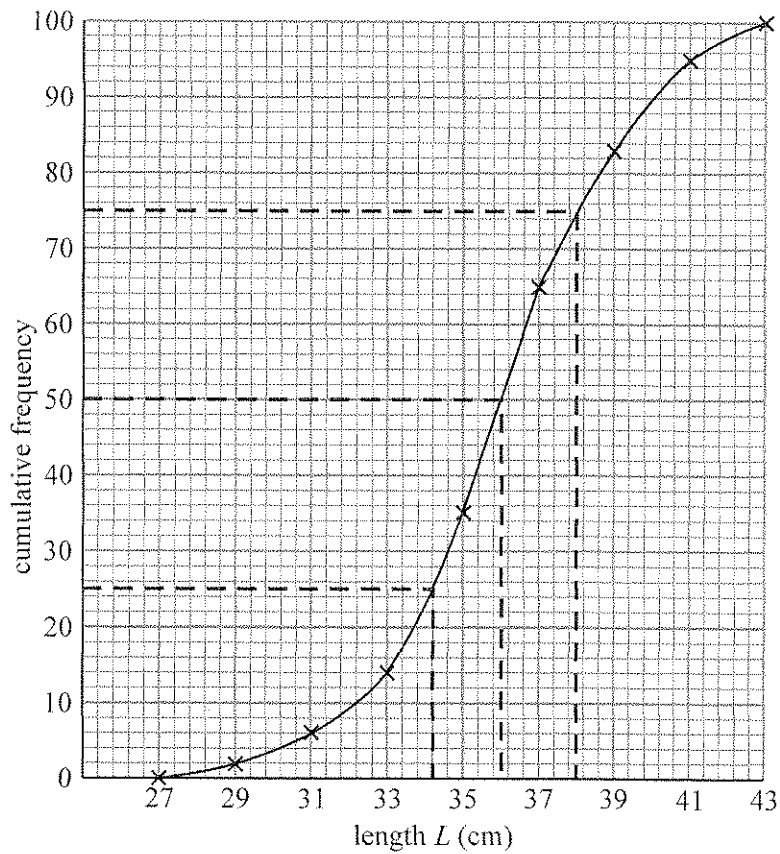
| L (cm) | f | Σf |
|-----------|-----|------------|
| ≤ 29 | 2 | 2 |
| ≤ 31 | 4 | 6 |
| ≤ 33 | 8 | 14 |
| ≤ 35 | 21 | 35 |
| ≤ 37 | 30 | 65 |
| ≤ 39 | 18 | 83 |
| ≤ 41 | 12 | 95 |
| ≤ 43 | 5 | 100 |

(A2) 2

Notes: Award (A1) for four correct entries in the column headed Σf .

Award (A2) for all 8 correct.

(b)



(A3) 3

Notes: Award (A1) for both axes and correct scale.

Award [$\frac{1}{2}$ mark] for each correctly plotted point and round up to a maximum of [2 marks].

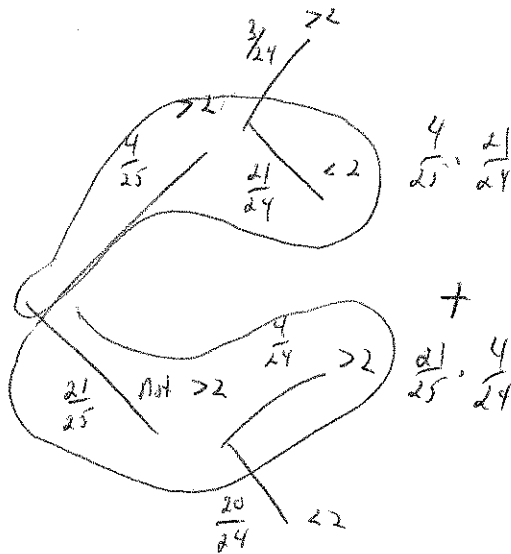
(ii) $P(\text{only 1 female has } > 2 \text{ children}) = 2 \times \frac{4}{25} \times \frac{21}{24}$ (M2)

Note: Award (M1) for $\frac{4}{25} \times \frac{21}{24}$, (M1) for multiplying by 2.

$= \frac{168}{600}$ or $\frac{21}{75}$ or 0.28 (A1)

(iii) $P(\text{second has 2 children} \mid \text{first has 0}) = \frac{6}{24}$ or $\frac{1}{4}$ or 0.25 (A1) 6

[15]



$$\begin{aligned}
 &P(\text{2nd has 2} \mid \text{first has 0}) \\
 &= \frac{P(\text{2nd has 2} \cap \text{first has 0})}{\text{first has 0}} \\
 &= \frac{\frac{5}{25} \cdot \frac{6}{24}}{\frac{5}{25}} = \frac{6}{24}
 \end{aligned}$$