

## Handling Data Revision Sheet (Answers)

- 1) Total mark of the 11 pupils is  $56 \times 11 = 616$ .  
 Total mark of all 12 pupils is  $58 \times 12 = 696$ .  
 So 12<sup>th</sup> pupils mark is  $696 - 616 = 80$

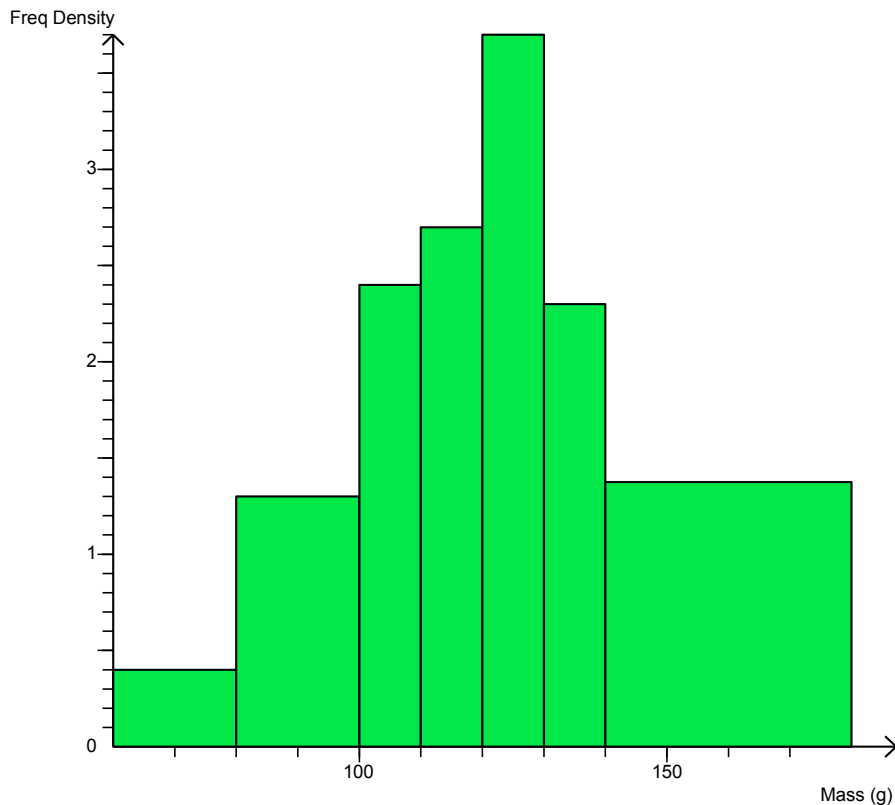
2) (a)

Mass (g)	Frequency (f)	Midpoint (x)	fx
60-80	8	70	560
80-100	26	90	2340
100-110	24	105	2520
110-120	27	115	3105
120-130	37	125	4625
130-140	23	135	3105
140-180	55	160	8800
	200		25055

$$\text{Mean mass} = \frac{25055}{200} = 125.275\text{g}$$

(b)

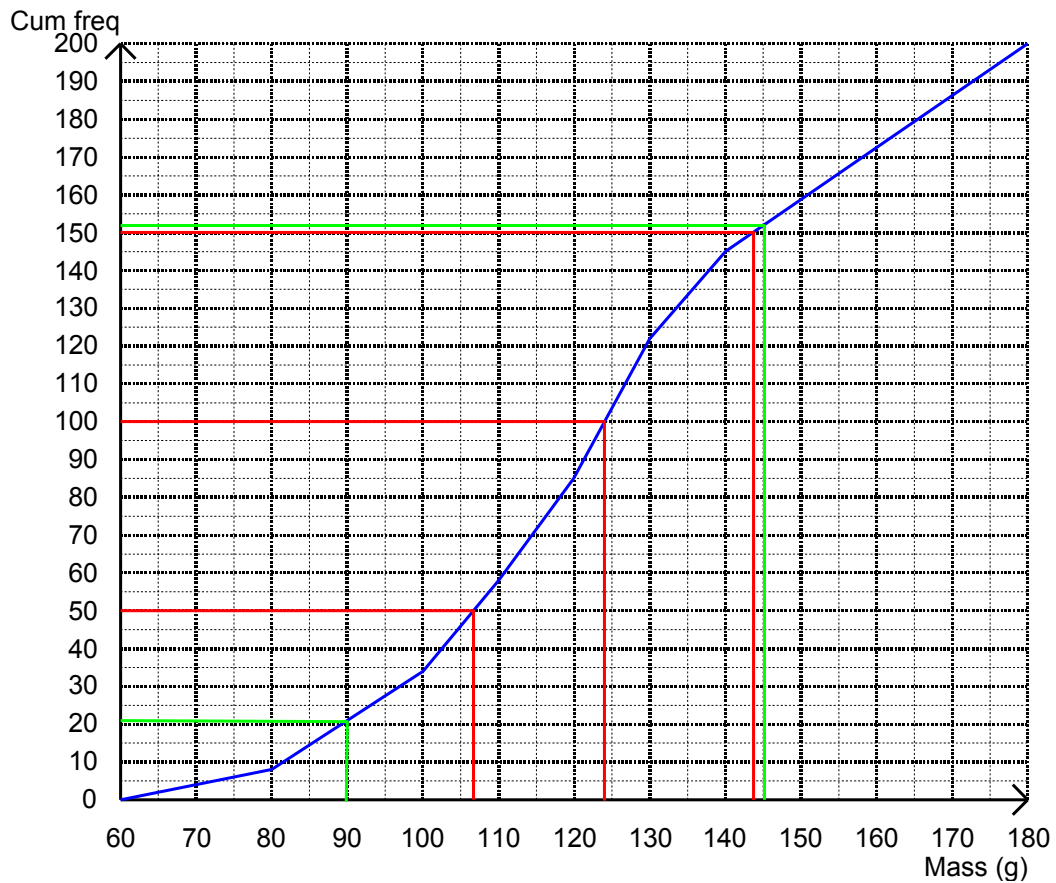
Mass (g)	Frequency (f)	Classwidth (w)	Frequency density (f/w)
60-80	8	20	0.4
80-100	26	20	1.3
100-110	24	10	2.4
110-120	27	10	2.7
120-130	37	10	3.7
130-140	23	10	2.3
140-180	55	40	1.375



- (c) The mode is in the centre of the distribution (or other suitable comment).

3) (a)

Mass (g)	Cum Freq
<80	8
<100	34
<110	58
<120	85
<130	122
<140	145
<180	200



(b) (See red lines on diagram)

(i) Median = 124g

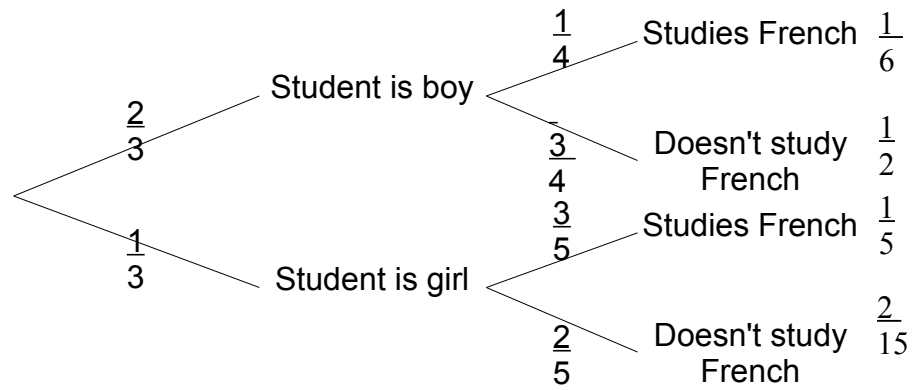
(ii)  $Q_1 = 117\text{g}$ ,  $Q_3 = 143\text{g}$ , so  $\text{IQR} = 143 - 117 = 26\text{g}$

(c) (See green lines on diagram)

(i) Number of potatoes over 145g =  $200 - 152 = 48$ , so  $p(\text{mass} > 145\text{g}) = \frac{48}{200} = \frac{6}{25}$

(ii) Number of potatoes under 90g = 21, so  $p(\text{Mass} < 90\text{g}) = \frac{21}{200}$

4) (a)



(b)  $\frac{2}{3} \times \frac{3}{4} = \frac{1}{2}$

(c)  $\frac{2}{3} \times \frac{1}{4} + \frac{1}{3} \times \frac{3}{5} = \frac{1}{6} + \frac{1}{5} = \frac{11}{30}$

5) (a)  $p(\text{two red and one White}) = p(\text{RRB or RBR or BRR})$

$$\begin{aligned} &= \frac{7}{10} \times \frac{6}{9} \times \frac{3}{8} + \frac{7}{10} \times \frac{3}{9} \times \frac{6}{8} + \frac{3}{10} \times \frac{7}{9} \times \frac{6}{8} \\ &= \left( \frac{7}{10} \times \frac{6}{9} \times \frac{3}{8} \right) \times 3 \\ &= \frac{21}{40} \end{aligned}$$

(b)  $p(\text{RRRB}) = \frac{7}{10} \times \frac{6}{9} \times \frac{5}{8} \times \frac{3}{7} = \frac{1}{8}$