5. The weights, in grams, of a random sample of 48 broad beans are summarised in the table.

Weight in grams (x)	Frequency (f)	Class midpoint (y)
$0.9 < x \leqslant 1.1$	9	1.0
$1.1 < x \leqslant 1.3$	12	1.2
$1.3 < x \leqslant 1.5$	11	1.4
$1.5 < x \leqslant 1.7$	8	1.6
$1.7 < x \leqslant 1.9$	3	1.8
$1.9 < x \leqslant 2.1$	3	2.0
$2.1 < x \leqslant 2.7$	2	2.4

(You may assume $\sum fy^2 = 101.56$)

A histogram was drawn to represent these data. The $2.1 < x \leqslant 2.7$ class was represented by a bar of width 1.5 cm and height 1 cm.

(a) Find the width and height of the $0.9 < x \leqslant 1.1$ class.

(3)

(b) Give a reason to justify the use of a histogram to represent these data.

(1)

(c) Estimate the mean and the standard deviation of the weights of these broad beans.

(4)

(d) Use linear interpolation to estimate the median of the weights of these broad beans.

(2)

One of these broad beans is selected at random.

(e) Estimate the probability that its weight lies between 1.1 grams and 1.6 grams.

(1)

One of these broad beans having a recorded weight of 0.95 grams was incorrectly weighed.
The correct weight is 1.4 grams.

(f) State, giving a reason, the effect this would have on your answers to part (c).
Do not carry out any further calculations.

(2)

(Total for Question 5 is 13 marks)