7. Yujie is investigating the weights of 10 young rabbits. She records the weight, x grams, of each rabbit and the results are summarised below.

$$\sum x = 8360 \qquad \text{and} \qquad \sum (x - \bar{x})^2 = 63\,840$$

(a) Calculate the mean and the standard deviation of the weights of these rabbits.

(3)

Given that the median weight of these rabbits is 815 grams,

(b) describe, giving a reason, the skewness of these data.

(2)

Two more rabbits weighing 776 grams and 896 grams are added to make a group of 12 rabbits.

(c) State, giving a reason, how the inclusion of these two rabbits would affect the mean.

(2)

(d) By considering the change in $\sum (x - \bar{x})^2$, state what effect the inclusion of these two rabbits would have on the standard deviation.

(2)

(Total for Question 7 is 9 marks)

TOTAL FOR PAPER IS 75 MARKS