1. The histogram and its frequency polygon below give information about the weights, in grams, of 50 plums.

Frequency density vs Weight (grams)
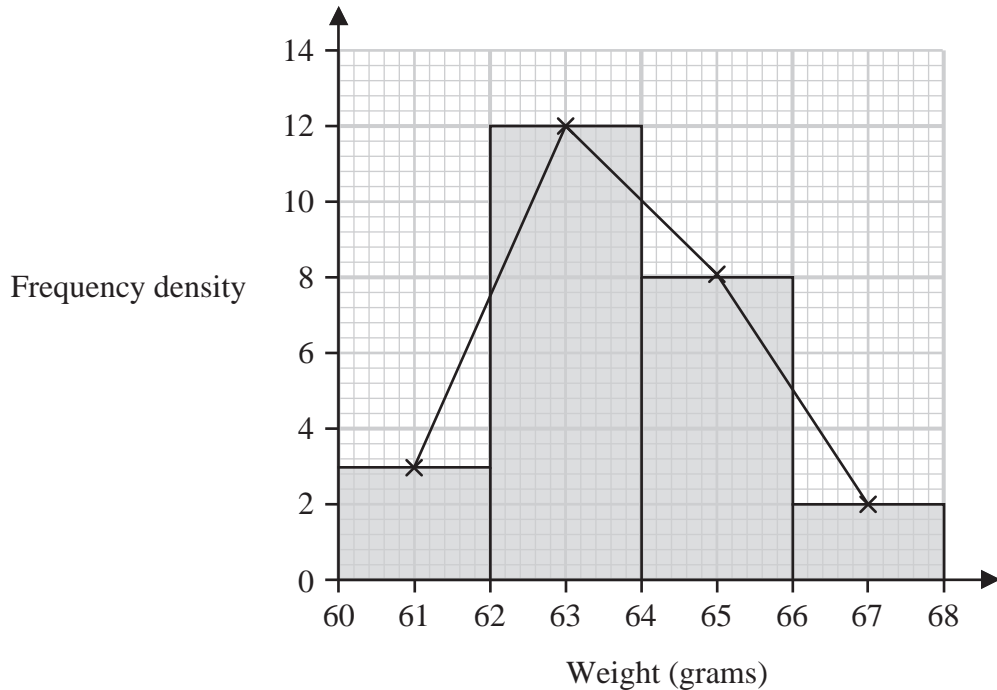
(a) Show that an estimate for the mean weight of the 50 plums is 63.72 grams.

(2)

(b) Calculate an estimate for the standard deviation of the 50 plums.

(2)

Later it was discovered that the scales used to weigh the plums were broken.

Each plum actually weighs 5 grams less than originally thought.

(c) State the effect this will have on the estimate of the standard deviation in part (b). Give a reason for your answer.

(1)