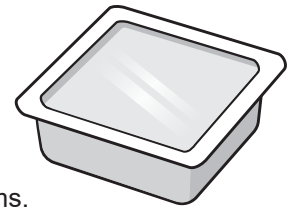


(8 marks)

A company manufactures tofu blocks in two sizes: small blocks with a labelled weight of 400 grams, and large blocks with a labelled weight of 600 grams.



- (a) The weights of individual small blocks are known to be normally distributed with a mean of 408 grams and a standard deviation of 6.9 grams.

Determine the probability that the weight of a randomly selected *small* block is *more* than its labelled weight.

(1 mark)

- (b) The weights of individual large blocks are known to be normally distributed with a mean of 624 grams. The company knows that the proportion of large blocks that weigh more than their labelled weight is 0.987.

Using the standard normal distribution (i.e. $Z \sim N(0,1)$), determine the standard deviation of the weights of individual *large* blocks.

(3 marks)

- (c) Which size of block (small or large) is more likely to weigh less than its labelled weight?

(1 mark)

