

9 (a) The masses, in grams, of plums of a certain kind have the distribution $N(55, 18)$.

(i) Find the probability that a plum chosen at random has a mass between 50.0 and 60.0 grams. [1]

(ii) The heaviest 5% of plums are classified as extra large.

Find the minimum mass of extra large plums. [1]

(iii) The plums are packed in bags, each containing 10 randomly selected plums.

Find the probability that a bag chosen at random has a total mass of less than 530 g. [4]

(b) The masses, in grams, of apples of a certain kind have the distribution $N(67, \sigma^2)$. It is given that half of the apples have masses between 62 g and 72 g.

Determine σ . [5]