6 The masses, in kilograms, of large and small bags of potatoes have the independent distributions N(2.5, 0.05) and N(0.8, 0.02) respectively.

(a) Find the probability that the total mass of a randomly chosen large bag of potatoes and a randomly chosen small bag of potatoes is more than 3.55 kg. [5]

(b) Find the probability that the mass of a randomly chosen large bag of potatoes is less than 3 times the mass of a randomly chosen small bag of potatoes. [5]