Leave blank

3. The weights of women boxers in a tournament are normally distributed with mean 64 kg and standard deviation 8 kg.

(a) Find the probability that a randomly chosen woman boxer in the tournament weighs less than 51 kg.

(3)

In the tournament, women boxers who weigh less than 51 kg are classified as lightweight. Ren weighs 49 kg and she has a match against another randomly selected, lightweight woman boxer.

(b) Find the probability that Ren weighs less than the other boxer.

(4)

In the tournament, women boxers who weigh more than H kg are classified as heavyweight. Given that 10% of the women boxers in the tournament are classified as heavyweight,

(c) find the value of H.

(3)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Leave blank

Question 3 continued

(Total 10 marks)

Q3