2. Two bags, ***X*** and ***Y***, each contain green marbles (G) and blue marbles (B) only.

- Bag ***X*** contains 5 green marbles and 4 blue marbles
- Bag ***Y*** contains 6 green marbles and 5 blue marbles

A marble is selected at random from bag ***X*** and placed in bag ***Y***
A second marble is selected at random from bag ***X*** and placed in bag ***Y***
A third marble is then selected, this time from bag ***Y***

(a) Use this information to complete the tree diagram shown on page 7

(3)

(b) Find the probability that the 2 marbles selected from bag ***X*** are of different colours.

(2)

(c) Find the probability that all 3 marbles selected are the same colour.

(2)

Given that all three marbles selected are the same colour,

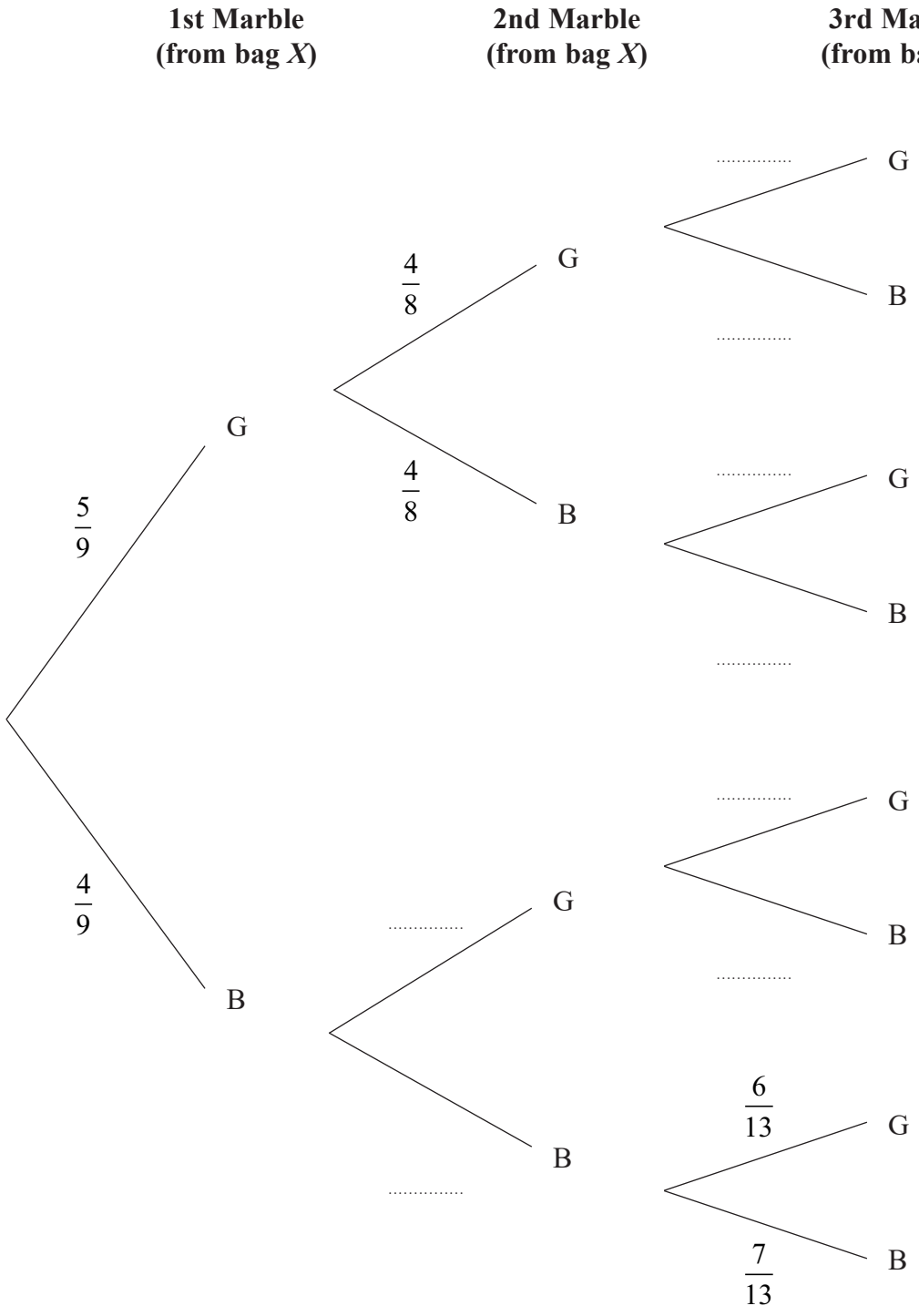
(d) find the probability that they are all green.

(3)

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Question 2 continued



Question 2 continued

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Question 2 continued

(Total for Question 2 is 10 marks)