

- 3 Peter has two boxes of bricks, box A and box B.  
Each box contains only red bricks, green bricks and yellow bricks.

In box A there are 15 bricks of which

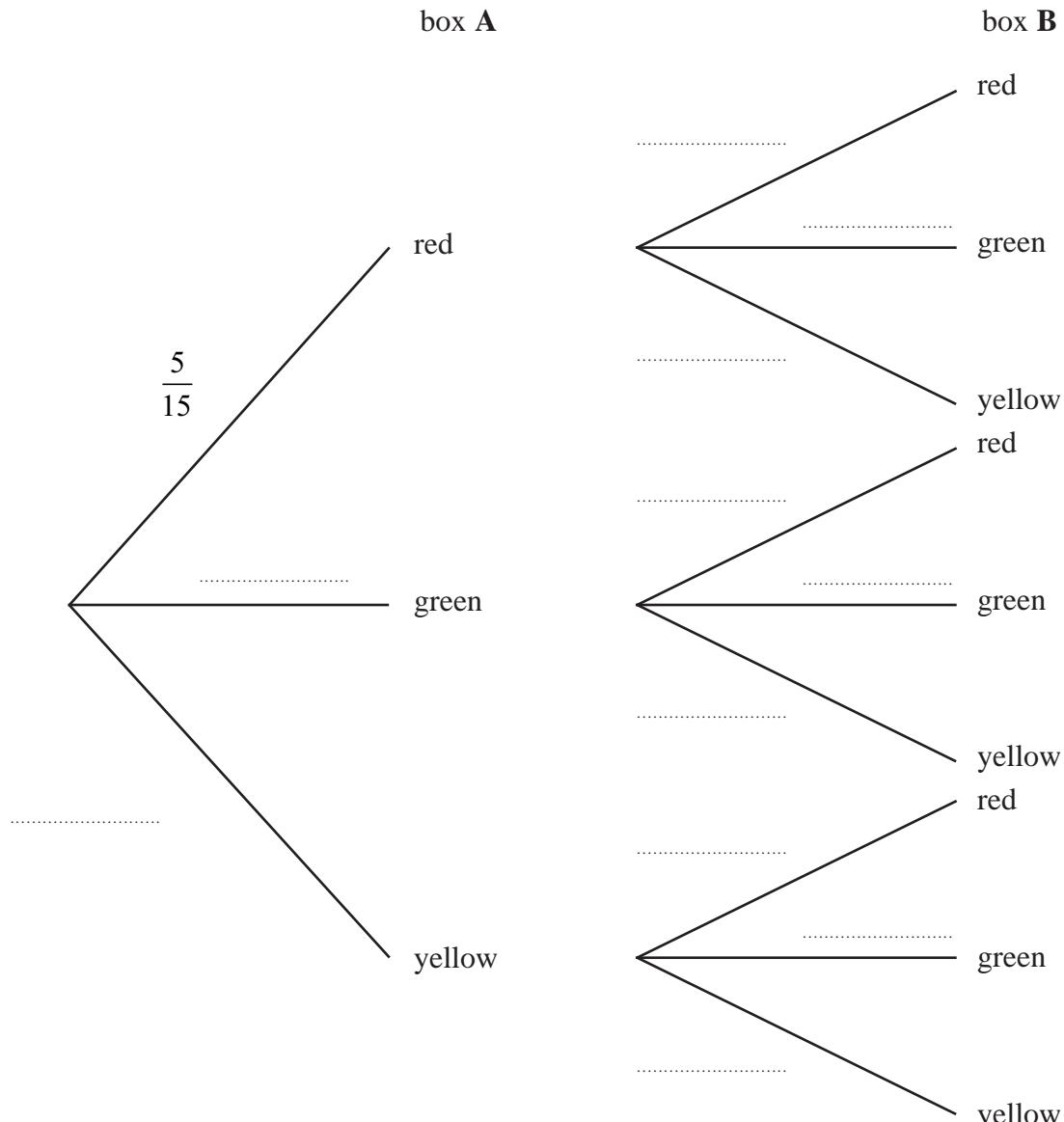
5 are red,  
7 are green,  
and 3 are yellow.

In box B there are 20 bricks of which

8 are red,  
9 are green,  
and 3 are yellow.

Ami is going to take a brick at random from box A and a brick at random from box B.  
She is going to put these two bricks on a table.

(a) Complete the probability tree diagram.



(3)

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**Question 3 continued**

- (b) Calculate the probability that the two bricks on the table are different colours.

(3)

Peter has a third box of bricks, box **C**.

This box also contains only red bricks, green bricks and yellow bricks.

After taking a brick from box **A** and a brick from box **B**, Ami then takes at random a brick from box **C**.

Ami then puts this brick with the other two bricks on the table.

The probability that there are three yellow bricks on the table is  $\frac{19}{1000}$

- (c) Find the least number of bricks that were in box **C** before Ami took a brick from box **C**.

(3)



P 6 8 8 1 9 A 0 7 3 6

### **Question 3 continued**

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**Question 3 continued**

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**(Total for Question 3 is 9 marks)**



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