

6 Ted has two boxes of buttons, Box A and Box B

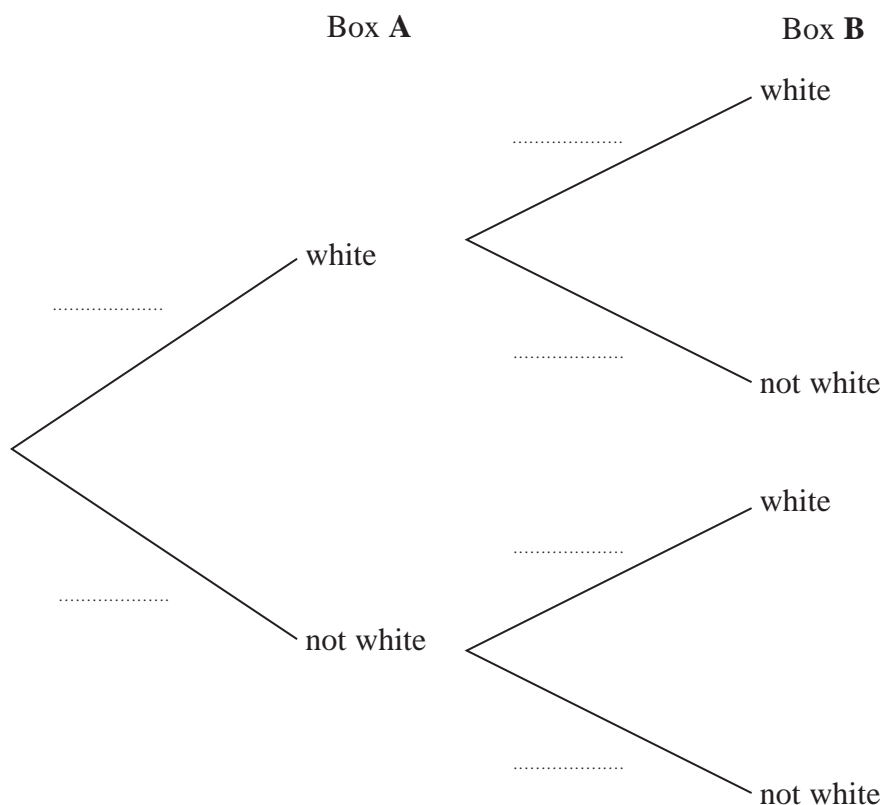
There are 20 buttons in Box A and 20 buttons in Box B

There are 13 white buttons in Box A

There are 9 white buttons in Box B

Ted takes at random a button from Box A and a button from Box B

(a) Complete the probability tree diagram.



(2)

(b) Calculate the probability that Ted takes at least one white button.

(3)

Ted also has a bag of buttons.

There are 30 buttons in the bag.

There are x white buttons in the bag.

Ted takes at random a button from Box A, a button from Box B and a button from the bag.

The probability that of the 3 buttons Ted has, 2 of the buttons are white is $\frac{337}{1000}$

(c) Work out the value of x

Show clear algebraic working.

(4)

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Question 6 continued

Handwriting practice area with horizontal dotted lines.



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Question 6 continued

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Question 6 continued

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(Total for Question 6 is 9 marks)

