8 There are 45 young people in a youth club.

The table below gives information about the heights of these young people.

Height (h cm)	Frequency
$140 < h \leqslant 150$	5
$150 < h \leqslant 155$	8
$155 < h \leqslant 160$	11
$160 < h \leqslant 165$	6
$165 < h \leqslant 170$	12
$170 < h \leqslant 190$	3

(a) Find the class interval that contains the median.

(1)

(b) Calculate an estimate of the mean height, in cm to one decimal place, of these young people.

(4)

One of the young people is selected at random.

The incomplete probability tree diagram on the opposite page gives information about the eye colour and the hair colour of this young person.

(c) Complete the probability tree diagram.

(1)

Given that, for these young people, hair colour is independent of height

(d) calculate the probability that the young person selected has fair hair and a height of more than 160 cm.

(3)

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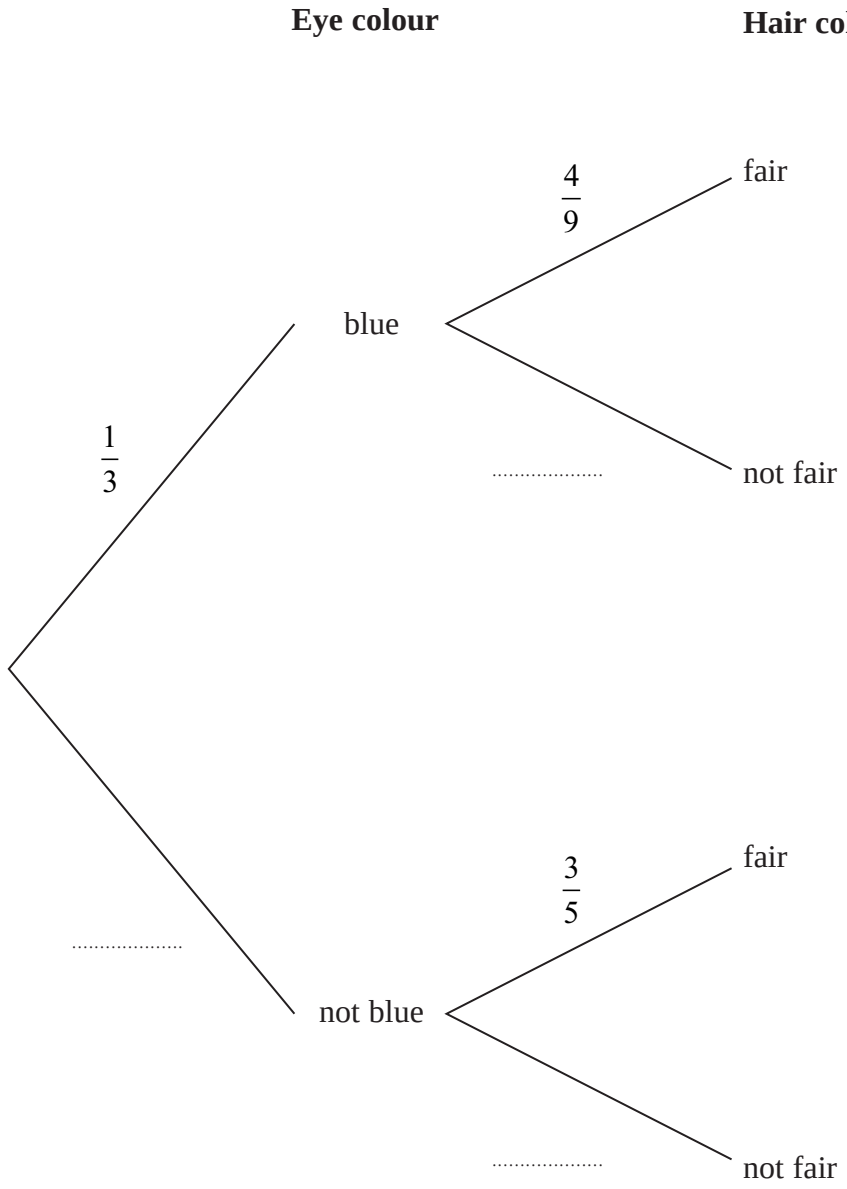
Question 8 continued



Question 8 continued

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Question 8 continued

(Total for Question 8 is 9 marks)