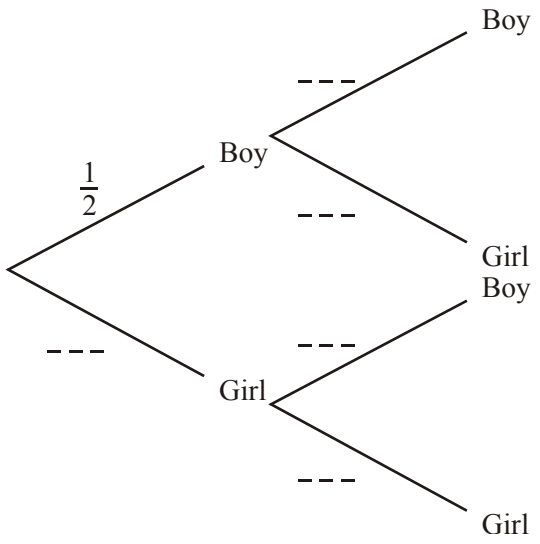
BECA / Huson / IB Mathematics Name:
4 December 2019

Classwork: Using trees to organize situations

1. Let F be the set of all families that have exactly 2 children.

(a) Assuming P(boy) = P(girl), copy and complete the following tree diagram, for families with 2 children.



(2)

(b) What is the probability that a family chosen at random from F has exactly

(i) 2 boys?

(ii) 2 boys, if it is known that the first child is a boy?

(iii) 2 boys, if it is known that there is a boy in the family?

(3)
(Total 5 marks)

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Early finishers

2. A bag contains 2 red, 3 yellow and 5 green sweets.

Without looking, Mary takes one sweet out of the bag and eats it. She then takes out a second sweet.

(a) If the first sweet is green, what is the probability that the second sweet is also green?

(b) If the first sweet is not red, what is the probability that the second sweet is red?

Working:

Answers:

(a) ……..

(b) ……..

(Total 4 marks)