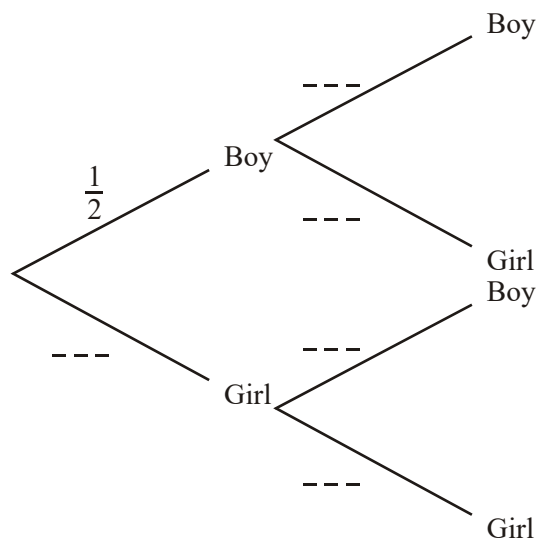


**Do Now**

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

- (a) Assuming  $P(\text{boy}) = P(\text{girl})$ , 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)

**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)**