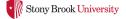# Probability and Combinatorics

Question

A family has four children. Which of the following is more likely?

(a) The number of boys is equal to the number of girls.
(b) The number of boys is **not** equal to the number of girls.
(c) Neither (a) nor (b) is more likely.

Answer: b.

It is suggested that students draw a tree diagram or otherwise determine the sample space to justify.

If you used the "tile" sample space problems to motivate the unit, this problem might be used as an assessment toward the end of the unit.