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Section 5.5 The 4 person Family

- 1. If a family decides to have 4 children, how many boys and how many girls will they have? We will use a simulation to discover the distribution of boys and girls.
 - a. Roll a die 4 times. A number 1-3 indicates a boy and a number 4-6 indicates a girl.
 - b. Record the number of boys and girls in a spread sheet.
 - c. Repeat steps a and b 15 times.
 - d. Create a histogram of your data.

Boys	Girls

- 2. Based on your simulation:
 - a. What is the most likely distribution of boys and girls?
 - b. What is the least likely distribution?

3. Make a tree diagram to illustrate the four children family distribution.

- a. How many result in 4 boys and 0 girls? What i
- What is the probability of this event occurring?
- b. How many result in 3 boys and 1 girl?
- What is the probability of this event occurring?
- c. How many result in 2 boys and 2 girls?
- What is the probability of this event occurring?
- d. How many result in 1 boy and 3 girls?
- What is the probability of this event occurring?
- e. How many result in 0 boys and 4 girls?
- What is the probability of this event occurring?
- f. What is the sum of the probabilities?