Problem 1 – Rolling Heads

- What does **randInt(0, 1)** do? How can it be used to simulate a coin toss?

- What does **randInt(0, 1, 5)** do?

- In the second row, record the number of heads for each number of trials. In the third row, write the experimental probabilities.

	1	5	10	15	20	25	30
# heads							
Probability							

- What happens to the experimental probabilities as the number of trials increases?

- If your teacher instructs you to, find experimental probabilities for larger numbers of trials. (You can record on the back of this worksheet.) Update your graph on page 1.9 as needed.

Problem 2 – Spinning a "2"

- In the second row, record the number of times the spinner lands on "2." In the third row, write the experimental probabilities.

	1	5	10	15	20	25	30
# of 2s							
Probability							

- Does your data follow the Law of Large Numbers? Explain.

- If your teacher instructs you to, find experimental probabilities for larger numbers of trials. (You can record on the back of this worksheet.) Update your graph on page 2.4 as needed.

Problem 3 – Exactly Two Girls

- What does **randInt(–8, 8, 5)** do?

- How can it be used to simulate observing families with two children and recording if the child is a boy or a girl?

- Specify what values represent a girl and which represent a boy. Be sure that both have an equal chance of occurring.

- Predict the theoretical probability of having exactly two girls from five births. Use data from other students as well as your own.

Extension

Use simulation to predict, on average, the number of times one needs to flip a coin before they get two heads in a row.