Getting Started

Lucky Seven

Marc and Li Ming are playing Lucky Seven.

? **Is Lucky Seven a fair game, or is one person more likely to win than the other?**

A. Play Lucky Seven with a partner.
Decide which is Player 1 and which Player 2.
Make the first two rolls. Record the results
of each roll.

Roll sum	Player 1	Player 2
7	✔	
10		✔

✔ shows which player won a counter

B. Predict which is true:
- Player 1 is more likely to win.
- Player 2 is more likely to win.
- The two players are equally likely to win.

C. Roll another six times. Record the
winner each time.

D. You rolled eight times. Use a fraction to
record the probability that each player
wins a counter based on your results.

E. Combine your results with the results
from two other pairs. Calculate the
probability that each player wins
a counter using all the data.

F. How accurate was your prediction
in Part B? Would you make the
same prediction again?
Explain why or why not.

Lucky Seven Rules

1. Play with a partner.

2. Place 10 counters in a pile
   between you.

3. Each of you rolls a die.

4. If the sum of the dice is 5, 6, 7,
   or 8, Player 1 gets a counter.
   For any other sum, Player 2
   gets a counter.

5. Repeat seven more times.

The winner is the player with
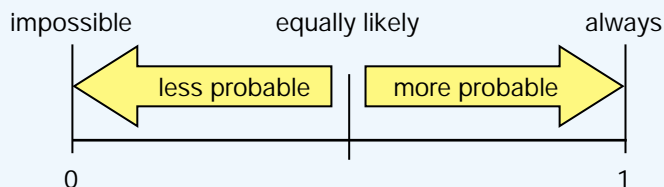the most counters at the end
of the game.

Do You Remember?

1. Based on Tyler's data, what is the probability for each?
   a) rolling a 6
   b) rolling an even number

Tyler's 18 Rolls					
4	5	6	4	1	3
2	3	6	1	3	4
4	1	1	3	5	6

2. Mark each probability from Question 1 on the probability line.

impossible   equally likely   always

less probable   more probable

0   1

3. This spinner is spun twice. Based on the results, which of the two listed events is more likely? Explain.

Results of Ten Double Spins					
10, 5	6, 5	5, 6	6, 5	5, 10	5, 5
10, 6	10, 5	5, 6	5, 5	10, 5	6, 6
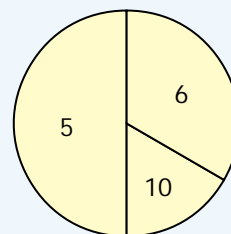
   a) spinning two 5s **or** spinning two 10s
   b) spinning two 5s **or** spinning one 5 and one non-5

4. Julia is picking two cubes from this bag.
   She pulls one out, puts it back, and pulls out another one.
   One outcome is "blue, red".
   List all of the possible outcomes.

5. Sydney rolled a die 10 times. Based on her data, she listed the probability of rolling a 5 to be $\frac{3}{10}$ and the probability of rolling a 1 to be $\frac{1}{10}$. Record one possibility for what her 10 rolls might have been.

6. Record each fraction as a percent.
   a) $\frac{1}{10}$ b) $\frac{1}{4}$ c) $\frac{3}{10}$