**Two Hospitals**

Two hospitals keep track of the gender of the babies born each day. City Hospital is a large urban medical center. County Hospital is a small regional facility. Many more babies are born each day in City Hospital than in County Hospital. Assume that for each birth (in either hospital) the probability that the baby is male is 0.5 and the probability that the baby is female is 0.5.

Which of the following is more likely to occur? Or are these events equally likely to occur?

a) At least 8 of the 10 babies born at City Hospital are female.
b) At least 4 or the 5 babies born at County Hospital are female.

Explain your choice.

Now, let's run a simulation of babies being born at each hospital.

County Hospital

• Use the cups to toss 5 pennies at a time to simulate the birth of 5 babies.
• Let heads represent boys and tails girls.
• Toss the coins and record the number of girls born.
• Repeat the experiment 30 times.
• Create a dotplot of the number of girls born in each of the 30 repetitions of the experiment.

City Hospital

- Use the cups to toss 10 pennies at a time to simulate the birth of 10 babies.
- Let heads represent boys and tails girls.
- Toss the coins and record the number of girls born
- Repeat the experiment 30 times
- Create a dotplot of the number of girls born in each of the 30 repetitions of the experiment

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Analyze/Look Back

According to your dotplots, which of the following is more likely to occur?
At least 8 of the 10 babies born at City Hospital are female.
At least 4 or the 5 babies born at County Hospital are female.

How do the results of this simulation compare with the predictions you made above?
Discuss.