Name _____ Date _____

LESSON 6.2

Practice C

For use with the lesson "Construct and Interpret Binomial Distributions"

Calculate the probability of tossing a coin 30 times and getting the given number of heads.

1. 8 **2.** 15 **3.** 20 **4.** 26

Calculate the probability of randomly guessing the given number of correct answers on a 30-question multiple choice exam that has choices A, B, C, and D for each question.

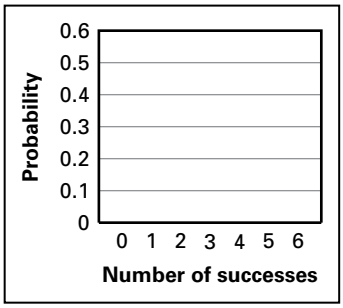
5. 10 **6.** 20 **7.** 25 **8.** 30

Calculate the probability of *k* successes for a binomial experiment consisting of *n* trials with probability *p* of success on each trial.

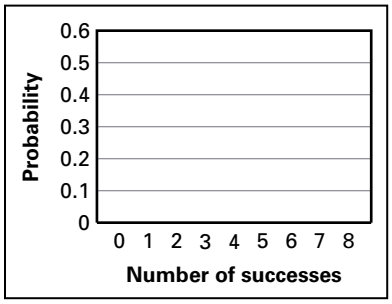
9. $k \geq 3, n = 8, p = 0.42$ **10.** $k \leq 4, n = 7, p = 0.18$

A binomial experiment consists of *n* trials with probability *p* of success on each trial. Draw a histogram of the binomial distribution that shows the probability of exactly *k* successes. *Describe* the distribution as either *symmetric* or *skewed*. Then find the most likely number of successes.

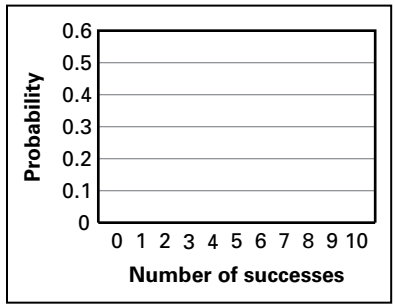
11. $n = 6, p = 0.76$



12. $n = 8, p = 0.245$



13. $n = 10, p = 0.066$



14. **Side Effects** According to a medical study, 40% of the people will experience an adverse side effect within one hour after taking a particular experimental drug. A total of 15 people participated in the study. What is the most likely number of people experiencing an adverse effect in the study?

15. **Entertainment** An entertainment system has *n* speakers. Each speaker will function properly with probability *p*, independent of whether the other speakers are functioning. The system will operate effectively if at least 50% of its speakers are functioning. For what values of *p* is a 4-speaker system more likely to operate than a 5-speaker system?