Name

13-7A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 934–937 for objectives.

USES Objective J

1. If the probability that an event occurs is p, what is the probability that the event does not occur? _____

2. If the probability that an event occurs is p, what is the probability that the event occurs exactly r times in n independent trials? _____

3. Suppose you flip six fair coins. Find the probability of getting

   a. all six heads. _____ b. exactly one head. _____

   c. exactly three heads. _____ d. at least five heads. _____

4. The AA Minor League Baseball team Akron Aeros is playing a three-game series with the Bowie Baysox. Suppose there is a 60% probability that Akron will win any particular game. Find the probability that Akron wins

   a. all three games. _____ b. exactly two games. _____

   c. exactly one game. _____ d. none of the games. _____

5. Airlines routinely sell more tickets for a flight than they have seats, expecting some people to not arrive. Suppose an airline sells 52 tickets for a regional jet flight with 50 seats. From previous data, they expect that each passenger has a 90% chance of showing up for the flight. Find the probability that more than 50 people show up. _____

In 6 and 7, consider a standardized test like the SAT where there is a penalty for wrong answers in the multiple-choice section. Your math teacher recommends that you reason if you can eliminate some answers. Suppose you do not know the answers to 5 of the questions, but you have narrowed each of them down to three possibilities, so your chance of guessing correctly on any one question is $\frac{1}{3}$.

6. Find the probability that you get the given number of the five questions correct.

   a. none _____ b. one _____ c. two _____

   d. three _____ e. four _____ f. five _____

7. You gain one point for each question answered correctly, and lose $\frac{1}{4}$ point for each question answered incorrectly. Use your answers to question 6 to find the probability that you gain or lose points overall by guessing from among three possibilities on these five questions.

   a. lose points _____ b. gain points _____

   c. break even _____