Name

13-9B Lesson Master

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

VOCABULARY

1. What is a *probability function*?

2. What is a *binomial probability distribution*?

3. **Fill in the Blank** Suppose a fair coin is tossed 14 times. When the probabilities are graphed as a function of the number of heads, the graph approaches a curve called _____.

USES Objective I

In 4 and 5, ACT scores range from 1 to 36, with a mean near 21 and a standard deviation near 5. Assume the scores are normally distributed.

4. About what percent of students have a score
   a. above 21? _____
   b. below 16? _____
   c. above 31? _____
   d. between 16 and 26? _____
   e. between 16 and 31? _____

5. Within what interval of scores would you expect
   a. the top 16% of the students to be? _____
   b. the bottom 16% of the students to be? _____
   c. the top 50% of the students to be? _____

REPRESENTATIONS Objective K

In 6 and 7, consider the function P with $P(n) = \frac{\binom{8}{n}}{2^n}$.

6. Complete the table below.

n	0	1	2	3	4	5	6	7	8
$P(n)$									

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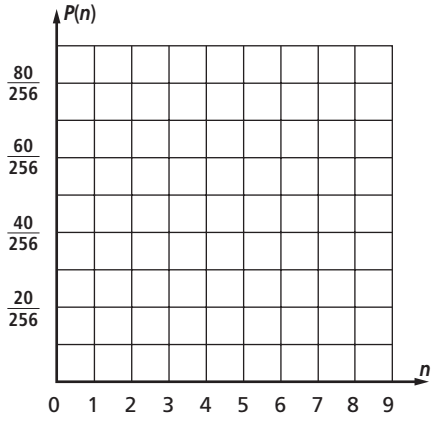
7. Below graph P, and sketch a normal curve through the data.

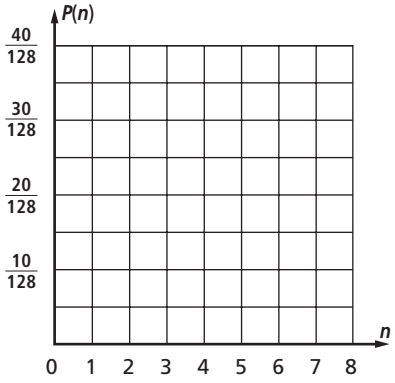


In 8 and 9, consider the function P with $P(n) = \frac{\binom{7}{n}}{2^n}$.

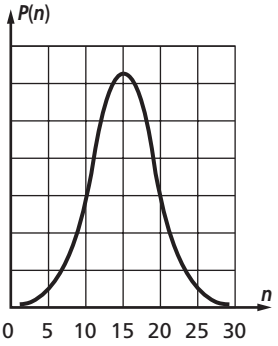
8. Complete the table below.

n	0	1	2	3	4	5	6	7
$P(n)$								

9. Below graph P, and sketch a normal curve through the data.



In 10–12, consider the normal distribution with mean 15 and standard deviation 4 as shown on the graph at the right.



10. About what percent of the data are greater than 11?

_____

11. About what percent of the data are between 7 and 23?

_____

12. a. Shade the portions of the graph at the right representing data more than two standard deviations away from 15.

b. About what percent of the graph did you shade in Part a?

_____