

# Practice 8

## Cumulative Practice through Unit 1

1. A health survey of 150 five-year-olds from the town of West Rock found that 90 had been immunized against measles. There are 700 five-year-olds in West Rock. Estimate the number who have been immunized against measles.
2. At a plant that produces car bumpers, 2 bumpers out of 250 did not meet safety specifications. The plant produces 2000 bumpers a month. Estimate the number of bumpers each month that will not meet safety specifications.

Suppose that, in a certain region, 1 out of 3 people watches the TV show “Star Talk.” The table at the right shows the results of a simulation in which a 1 or a 2 showing on a die represents a watcher of “Star Talk.” Each of the 20 samples consists of 5 tosses of the die.

Number of watchers in sample	Number of samples
0	2
1	5
2	8
3	4
4	1
5	0

3. What is the greatest number of watchers in any sample?
4. What is the mean number of watchers in the samples?
5. According to the simulation, what is the experimental probability that a resident of the region watches “Star Talk?”

Predict the next number in each pattern.

6. 5, 8, 11, 14,   ?

7.  $1, \frac{1}{2}, 3, \frac{1}{4}, 5, \underline{\quad?}$

8. 1, 10, 101, 1010,   ?

For Exercises 9–13, use deductive reasoning to reach a conclusion.

9. The opposite angles of any parallelogram are equal in measure. Every rhombus is a parallelogram.
10. Francisco is older than his friend Ignacio. Ignacio is older than Francisco’s brother Jaime.
11. The product of two odd integers is odd.  $a$  and  $b$  are integers, and  $ab = 144$ .
12. Juanita has a dentist appointment at 4:00 P.M. The bus that she takes to the dentist’s office takes 20 minutes to get there, and it is now 3:45 P.M.
13. Use deductive reasoning to show that the sum of an even number and an odd number is odd.