

LESSON **2-1** **Problem Solving**
Using Inductive Reasoning to Make Conjectures

The table shows the lengths of five green iguanas after birth and then after 1 year.

- Estimate the length of a green iguana after 1 year if it was 8 inches long when it hatched.

- Make a conjecture about the average growth of a green iguana during the first year.

Iguana	Length after Hatching (in.)	Length after 1 Year (in.)
1	10	36
2	9	34
3	11	35
4	12	35
5	10	37

The times for the first eight matches of the Santa Barbara Open women's volleyball tournament are shown. Show that each conjecture is false by finding a counterexample.

Match	1	2	3	4	5	6	7	8
Time	0:31	0:56	0:51	0:18	0:50	0:34	1:03	0:36

- Every one of the first eight matches lasted less than 1 hour.
- These matches were all longer than a half hour.

Choose the best answer.

- The table shows the number of cells present during three phases of mitosis. If a sample contained 80 cells during interphase, which is the best prediction for the number of cells present during prophase?
A 18 cells **C** 40 cells
B 24 cells **D** 80 cells
- About 75% of the students at Jackson High School volunteer to clean up a half-mile stretch of road every year. If there are 408 students in the school this year, about how many are expected to volunteer for the clean-up?
F 102 students **H** 306 students
G 204 students **J** 333 students

Sample	Number of Cells		
	Interphase	Prophase	Metaphase
1	86	22	5
2	70	28	3
3	76	32	3
4	91	25	5
5	65	16	4
6	89	34	6

- Mara earned \$25, \$25, \$20, and \$28 in the last 4 weeks for walking her neighbor's dogs. If her earnings continue in this way, which is the best estimate for her average weekly earnings for next month?
A \$20.50 **C** \$24.50
B \$23.33 **D** \$25.00