

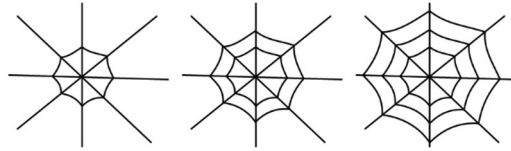
2.2

Extra Practice

In Exercises 1 and 2, describe the pattern. Then write or draw the next two numbers, letters, or figures.

1. A, 26, B, 25, C, 24, ...

2.



In Exercises 3 and 4, make and test a conjecture about the given quantity.

- 3. the sum of two absolute values
- 4. the product of a number and its square
- 5. Vertical angles are always complementary. Find a counterexample to show that the conjecture is false.

In Exercises 6 and 7, use the Law of Detachment to determine what you can conclude from the given information, if possible.

- 6. If you eat a healthy breakfast, then you will not be hungry until lunchtime. You are not hungry until lunchtime.
- 7. Adjacent angles share one common ray. $\angle AOB$ and $\angle DOB$ are adjacent angles.

In Exercises 8 and 9, use the Law of Syllogism to write a new conditional statement that follows from the pair of true statements, if possible.

- 8. If a polygon has three sides, then it is a triangle. If triangle has two congruent sides, then it is an isosceles triangle.
- 9. If it is Tuesday, then you mow the grass. If you mow the grass, then you water the flowers.

In Exercises 10 and 11, decide whether inductive reasoning or deductive reasoning is used to reach the conclusion. Explain your reasoning.

- 10. All mammals have hair. Cats are mammals. So, all cats have hair.
- 11. Each time you go to school you walk. You went to school today, so you walked.
- 12. Is it possible to have a series of true conditional statements that lead to a false conclusion? Explain.

13. The table shows the cost per pound of several varieties of organic and nonorganic produce at your local grocery store. What conjecture can you make about the relation between the cost of organic produce and the cost of nonorganic produce? Explain your reasoning.

	Organic	Nonorganic
Bananas	\$0.49	\$0.29
Carrots	\$1.19	\$0.89
Strawberries	\$3.99	\$2.99