

## CHAPTER 2 TEST REVIEW

### 2.1

In Exercises 1 and 2, identify the hypothesis and the conclusion.

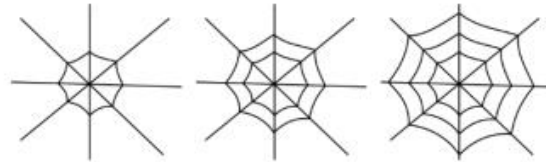
1. If you like to eat, then you are a good cook.
2. If an animal is a bear, then it is a mammal.
3. Let  $p$  be “a tree is an oak tree” and let  $q$  be “it is a deciduous tree.” Write each statement in words. Then decide whether it is *true* or *false*.
  - a. the conditional statement  $p \rightarrow q$
  - b. the converse  $q \rightarrow p$
  - c. the inverse  $\sim p \rightarrow \sim q$
  - d. the contrapositive  $\sim q \rightarrow \sim p$

### 2.2

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.



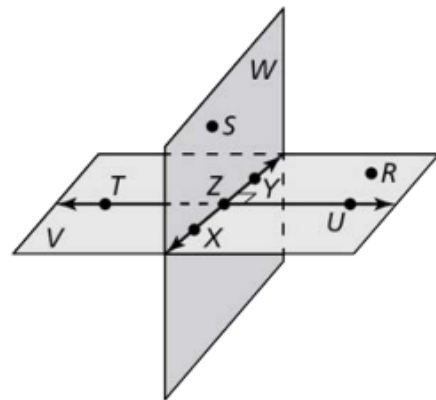
In Exercises 3 and 4, make and test a conjecture about the given quantity.

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.

### 2.3

In Exercises 9–12, use the diagram to determine whether you can assume the statement.

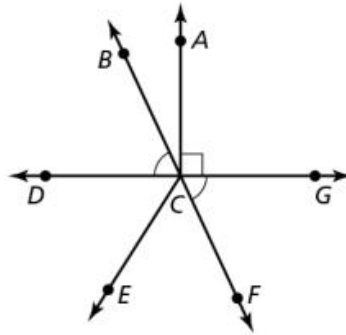
9. Planes  $W$  and  $V$  intersect at  $\overline{TU}$ .
10. Points  $T$ ,  $U$ , and  $R$  are coplanar.
11.  $\angle TZX$  and  $\angle UZY$  are vertical angles.
12.  $\overline{TU}$  lies in plane  $W$ .



## 2.4

In Exercises 7 and 8, use the property to complete the statement.

7. Multiplication Property of Equality: If  $m\angle J = 30^\circ$ , then  $2m\angle J = \underline{\hspace{2cm}}$ .
8. Transitive Property: If  $3x + y = 7$  and  $7 = 5x - 2y$ , then  $\underline{\hspace{2cm}}$ .
10. In the diagram,  $m\angle ACB = 25^\circ$  and  $\overline{CE}$  bisects  $\angle DCF$ . Explain how to find  $m\angle DCE$ .



## 2.5 & 2.6

Complete the proof using the correct reason. (1) Congruent segments, (2) Given, (3) Congruent angles, (4) Symmetric, (5) Reflexive

Given:  $\overline{AB} \cong \overline{CD}$

Prove:  $\overline{CD} \cong \overline{AB}$

STATEMENTS	REASONS
$\overline{AB} \cong \overline{CD}$	7. _____
$AB = CD$	8. _____
$CD = AB$	9. _____
$\overline{CD} \cong \overline{AB}$	Definition of congruent segments