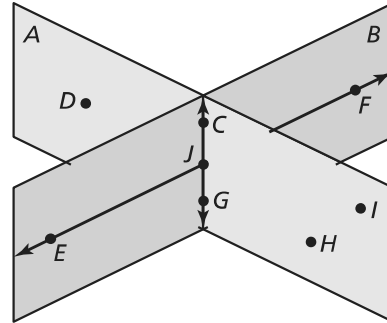


2.3

Practice B

In Exercises 1–6, use the diagram to write an example of the postulate.

1. Two Point Postulate (Postulate 2.1)
2. Line-Point Postulate (Postulate 2.2)
3. Line Intersection Postulate (Postulate 2.3)
4. Three Point Postulate (Postulate 2.4)
5. Plane-Line Postulate (Postulate 2.6)
6. Plane Intersection Postulate (Postulate 2.7)

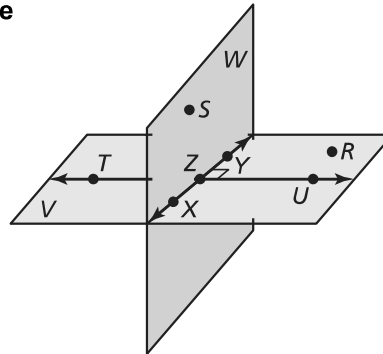


In Exercises 7 and 8, sketch a diagram of the description.

7. \overline{AB} , \overline{CD} , and \overline{BD} that intersect at exactly two points
8. planes S and T intersecting at a right angle, \overline{AB} on plane S and plane T , and point C is the midpoint of \overline{AB}

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 .



13. The Plane Intersection Postulate (Postulate 2.7) is written in if-then form. Write the converse, inverse, and contrapositive and state which ones are true.
14. Is it possible for three planes to intersect along the same line? Explain your reasoning.
15. Your friend claims that if the Plane-Line Postulate (Postulate 2.6) is true, then all lines that pass through a point in a plane must also be in that same plane. Is your friend correct? Explain your reasoning.
16. \overline{AB} and \overline{CD} lie in plane Z . If \overline{EF} bisects either \overline{AB} or \overline{CD} , does \overline{EF} lie in plane Z ? If \overline{EF} bisects both \overline{AB} and \overline{CD} , does \overline{EF} lie in plane Z ? Explain your reasoning.



Puzzle Time

Why Do Geese Fly South Every Year?

A	B	C	D	E	F
G	H	I			

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

4
GEESE
P
VACATION
3
IT
0
MEET
Q
WALK
6
THE

Match the item that makes the statement correct.

- | | |
|--|---|
| A. If two lines intersect, | 1. then their intersection is a line. |
| B. Through any three noncollinear points | 2. two points. |
| C. If two points lie in a plane, | 3. there exists exactly one plane. |
| D. If two planes intersect, | 4. three noncollinear points. |
| E. Through any two points, | 5. then their intersection is exactly one point. |
| F. A plane contains at least | 6. there exists exactly one line. |
| G. A line contains at least | 7. then the line containing them lies in the plane. |

7
WOULD
\overline{AB}
COLD
5
BECAUSE
1
TAKE
2
FOREVER
\overline{AB}
TO

Identify the correct answer using the diagram.

- H. The intersection of planes Q and P .
- I. What plane is defined by points A , B , and C ?

