

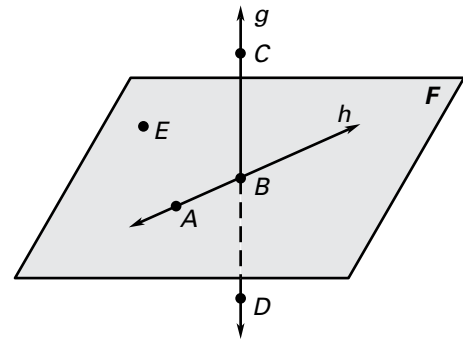
**LESSON**  
**1.1**

**Practice A**

For use with pages 2–8

**In Exercises 1–8, use the diagram.**

1. Give two other names for  $\overleftrightarrow{AB}$ .
2. Name three points that are collinear.
3. Give another name for plane  $F$ .
4. Name a point that is not coplanar with  $A$ ,  $B$ , and  $C$ .
5. Give another name for  $\overleftrightarrow{CD}$ .
6. Name three rays with endpoint  $B$ .
7. Name a pair of opposite rays.
8. Give another name for  $\overleftrightarrow{CD}$ .

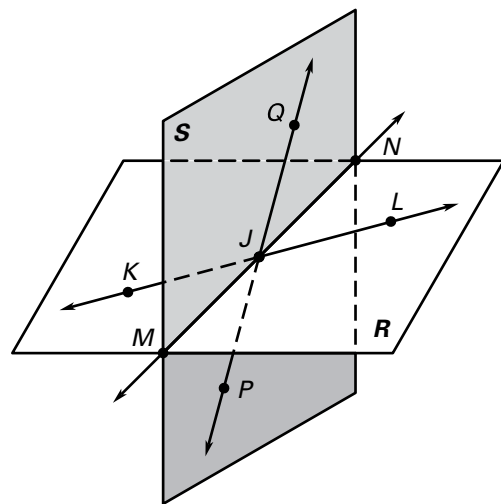


**Sketch the figure described.**

9. Three points that are collinear
10. Four points that are coplanar
11. Three lines that intersect at one point
12. A line and a plane that intersect at one point

**In Exercises 13–20, use the diagram.**

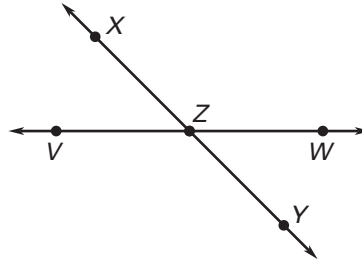
13. Are points  $J$ ,  $K$ , and  $L$  collinear?
14. Are points  $J$ ,  $K$ , and  $L$  coplanar?
15. Are points  $J$ ,  $K$ , and  $M$  collinear?
16. Are points  $J$ ,  $K$ , and  $M$  coplanar?
17. Name the intersection of  $\overleftrightarrow{KL}$  and  $\overleftrightarrow{PQ}$ .
18. Name the intersection of  $\overleftrightarrow{PQ}$  and plane  $KMN$ .
19. Name the intersection of plane  $R$  and plane  $S$ .
20. Name three pairs of opposite rays.



**LESSON 1.1 Practice A** *continued*  
For use with pages 2–8

In Exercises 21–23, use the diagram.

- 21. Name 8 different rays.
- 22. Name 2 pairs of opposite rays.
- 23. Name 2 lines that intersect at point Z.

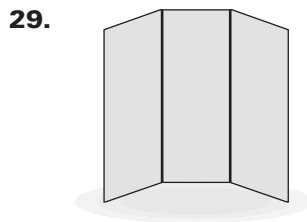
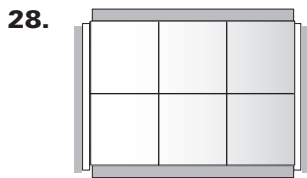


- 24. Sketch three noncollinear points  $A$ ,  $B$ , and  $C$ . Sketch  $\overleftrightarrow{AB}$ . Then add a point  $D$  and sketch  $\overleftrightarrow{CD}$  so that  $\overleftrightarrow{CD}$  intersects  $\overleftrightarrow{AB}$  at point  $B$ .

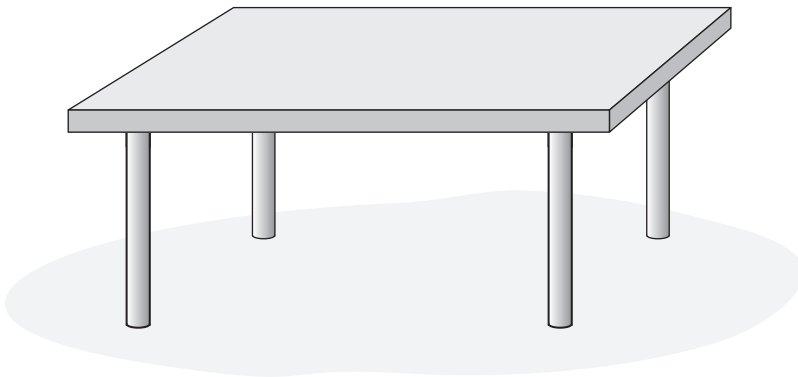
**You are given an equation of a line and a point. Use substitution to determine whether the point is on the line.**

- 25.  $y = x + 4$ ;  $A(3, 7)$
- 26.  $y = x - 5$ ;  $A(1, 6)$
- 27.  $y = -x - 2$ ;  $A(-8, -10)$

**What kind of geometric intersection does the picture suggest?**



- 31. **Table** A four-legged table is placed on a flat surface. The table rocks from side to side. *Explain* why this might occur.

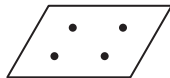


# Answers

## Lesson 1.1

### Practice Level A

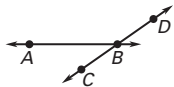
1.  $\overrightarrow{BA}$  and line  $h$  2. points  $B, C,$  and  $D$   
 3. plane  $ABE$  4. point  $E$  5.  $\overline{DC}$   
 6.  $\overrightarrow{BA}, \overrightarrow{BC},$  and  $\overrightarrow{BD}$  7.  $\overrightarrow{BC}$  and  $\overrightarrow{BD}$  8.  $\overrightarrow{CB}$   
 9. Sample answer: 10. Sample answer:



11. Sample answer: 12. Sample answer:



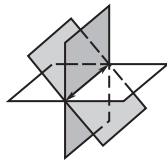
13. yes 14. yes 15. no 16. yes 17. point  $J$   
 18. point  $J$  19.  $\overline{MN}$  20.  $\overline{JK}$  and  $\overline{JL}, \overline{JM}$  and  $\overline{JN}, \overline{JP}$  and  $\overline{JQ}$  21.  $\overline{XZ}, \overline{ZX}, \overline{YZ}, \overline{ZY}, \overline{ZV}, \overline{ZW}, \overline{VW},$  and  $\overline{WV}$   
 22.  $\overline{ZX}$  and  $\overline{ZY}, \overline{ZV}$  and  $\overline{ZW}$  23.  $\overline{XY}$  and  $\overline{VW}$   
 24. Sample answer:



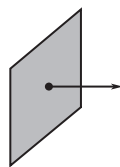
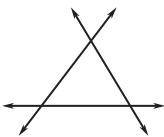
25. yes 26. no 27. no 28. intersecting lines  
 29. intersecting planes 30. the intersection of a line and a plane 31. All four legs are not of equal length so the bottom of the legs are not coplanar.

### Practice Level B

1. true 2. true 3. false 4. true 5. false  
 6. true 7. false 8. true  
 9. Sample answer: 10. Sample answer:

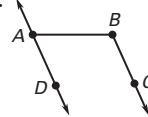


11. Sample answer: 12. Sample answer:

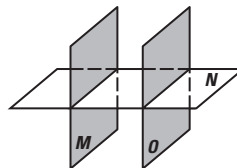


13.  $\overrightarrow{AB}, \overrightarrow{BA}, \overrightarrow{AC}, \overrightarrow{CA}, \overrightarrow{BC}, \overrightarrow{CB}, \overrightarrow{CD}, \overrightarrow{DC}, \overrightarrow{EC}, \overrightarrow{CE}, \overrightarrow{ED}, \overrightarrow{DE}$   
 14.  $\overrightarrow{CA}$  and  $\overrightarrow{CB}$   
 15.  $\overrightarrow{EC}, \overrightarrow{CD}, \overrightarrow{AB}$

16. Sample answer:



- 17.



18. yes 19. no 20. no 21. yes 22. no 23. no



ray



segment



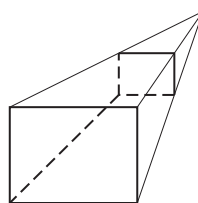
rays



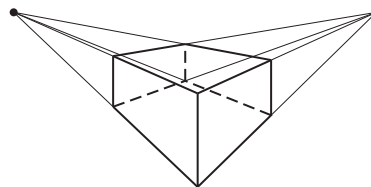
point

28. a. four-legged stool; Possible explanation: The tips of the 4 legs are not coplanar.  
 b. Possible explanation: The three-legged stool will not rock because the tips of its legs will always be coplanar. The four-legged stool may rock if the tips of its legs are not coplanar.  
 29. a. Yes, it has one vanishing point.

- b.



- c. Sample answer:



### Practice Level C

1.  $\overrightarrow{BA}, \overrightarrow{AG}, \overrightarrow{GA}, \overrightarrow{BG}$  and  $\overrightarrow{GB}$  2.  $A, G,$  and  $B; C, G,$  and  $D; E, B,$  and  $F; M, G,$  and  $N$   
 3. points  $M, G,$  and  $N$   
 4. points  $C, D, E, F,$  and  $J$  5.  $\overline{GC}$   
 6.  $\overrightarrow{GA}, \overrightarrow{GB}, \overrightarrow{GC}, \overrightarrow{GD}, \overrightarrow{GM},$  and  $\overrightarrow{GN}$   
 7.  $\overrightarrow{GA}$  and  $\overrightarrow{GB}, \overrightarrow{GC}$  and  $\overrightarrow{GD}, \overrightarrow{GM}$  and  $\overrightarrow{GN}, \overline{BE}$  and  $\overline{BF}$  8.  $\overline{FE}$  9. no 10. yes 11. yes  
 12. yes 13. point  $G$  14. point  $G$  15.  $\overline{MN}$   
 16. point  $B$