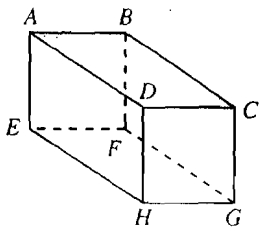
Postulates and Theorems Relating Points, Lines, and Planes

For use after Section 1-5

Classify each statement as true or false.

1. Two points can lie in each of two different lines. _____
2. Three noncollinear points can lie in each of two different planes. _____
3. Three collinear points lie in only one plane. _____
4. Two intersecting lines are contained in exactly one plane. _____
5. If two lines intersect, then they intersect in exactly one point. _____
6. If two planes intersect, then their intersection is a line. _____

Name each of the following.



Exs. 7–18

7. The plane that contains $\overleftrightarrow{BF}$ and $\overleftrightarrow{FG}$ _____
8. The plane that intersects $ADHE$ in $\overleftrightarrow{AE}$ _____
9. The plane that doesn't intersect $ABCD$ _____
10. The intersection of planes $ADHE$, $DCGH$, and $ABCD$ is _____
11. Two lines that don't intersect plane $EFGH$ _____

Write the postulate or theorem that justifies the statement about the diagram. (Write out in full - do not give the Postulate or Theorem number!)

12. Plane $BCGF$ is the only plane containing $\overleftrightarrow{FG}$ and point C. _____
13. Lines $\overleftrightarrow{BF}$ and $\overleftrightarrow{FG}$ intersect in only one point. _____
14. $\overleftrightarrow{FH}$ is contained in the plane $FGHE$. _____
15. Planes $ADHE$ and $EFGH$ intersect in only one line. _____