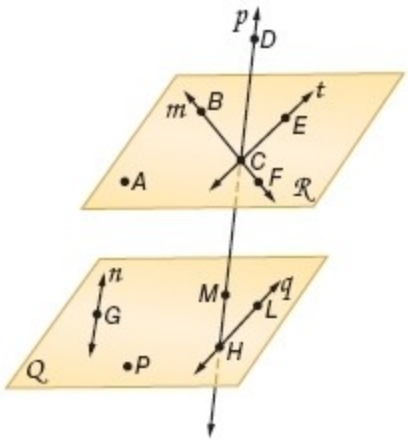
1-1 Points, Lines, and Planes

Refer to the figure.



16. Name the intersection of lines *m* and *t*.

SOLUTION:

The two lines *m* and *t* intersect at the point *C* on the plane *R*.

18. Are points *F*, *M*, *G*, and *P* coplanar? Explain.

SOLUTION:

Coplanar points are points that lie in the same plane. Here, the points *G* and *P* lie on the plane *Q*. But the point *M* lies between the planes *Q* and *R* and the point *F* lies on the plane *R*.

20. What is another name for line *t*?

SOLUTION:

There are two points *C* and *E* marked on the line *t*. So, the line *t* can also be named as $\overleftrightarrow{CE}$.

Name the geometric term(s) modeled by each object.

22. 

SOLUTION:

The tip of a pen denotes a location. So, it models a point.

24. 

SOLUTION:

The chessboard is a flat surface that extends in all directions. So, it is a plane. Also it has lines that intersect on the plane. So, it also models intersecting lines.

26. a blanket

SOLUTION:

A blanket is a flat surface that extends in all directions. So, it models a plane.

28. a telephone pole

SOLUTION:

A telephone pole models a line.

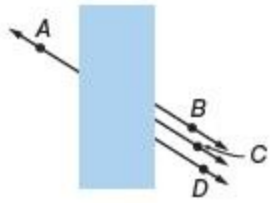
Draw and label a figure for each relationship.

34. Points *X* and *Y* lie on $\overleftrightarrow{CD}$.

SOLUTION:

Draw a line $\overleftrightarrow{CD}$ and plot two points *X* and *Y* on the line.

52. **OPTICAL ILLUSION** Name two points on the same line in the figure. How can you support your assertion?



SOLUTION:

Using a ruler we can figure out that the line containing the point *C* is an extension of the line containing the point *A*. Therefore, the points *A* and *C* are collinear.