

# 2 - 5

## *Postulates*

### **POSTULATE**

*A statement that is accepted as true, also considered a fact. Does not need to be proven.*

*Below are a list of FACTS (Postulates) that you already know.*

- 2.1** Through any two points, there is exactly one line.
- 2.2** Through any three points not on the same line, there is exactly one plane.
- 2.3** A line contains at least two points.
- 2.4** A plane contains at least three points not on the same line.
- 2.5** If two points lie in a plane, then the entire line containing those points lies in that plane.
- 2.6** If two lines intersect, then their intersection is exactly one point.
- 2.7** If two planes intersect, then their intersection is a line.

## **HOW TO USE THE FACTS**

Determine whether each statement is *always*, *sometimes*, or *never* true. Explain.

- a. If points  $A$ ,  $B$ , and  $C$  lie in plane  $M$ , then they are collinear.**

Sometimes;  $A$ ,  $B$ , and  $C$  do not have to be collinear to lie in plane  $M$ .

- b. There is exactly one plane that contains noncollinear points  $P$ ,  $Q$ , and  $R$ .**

Always; Postulate 2.2 states that through any three noncollinear points, there is exactly one plane.

- c. There are at least two lines through points  $M$  and  $N$ .**

Never; Postulate 2.1 states that through any two points, there is exactly one line.