from the plane; *therefore*, from the great circle trace count off 90° from the right to left along the east-west diameter and mark *P*, the projection of the pole of the plane (Fig. 11.5).

The line which is the pole is *projected* as a point; this point *therefore* represents the plane. Any linear structure can be similarly represented by a direct plot, but when a pole is used to represent a plane it is a *reciprocal* plot.

PROBLEM

Given a line (30, S 42 E), plot on the stereonet.

VISUALIZATION

Hold a pencil with the given orientation over the net and visualize its intersection in the southeast quadrant of the hemisphere.

PLOTTING A LINE (Fig. 11.6)

1. With the overlay in place and the south index marked *S*, locate a point on the primitive representing the trend of the line by counting 42° anticlockwise from *S*.
2. Revolve this trend mark to the south point of the net.
3. Count off 30° from the primitive toward the center along the north-south diameter, and plot the point.
4. Restore the overlay to the starting position and recheck by visualization.

In this particular exercise, the graduations marked by the small circles were used for the first time. However, the trend mark (Step 2 above) could just as easily have been moved to the east point of the net, and the point plotted by counting off along the east-west diameter. In order to assure yourself that this is so, revolve your plotted point to the east-west line and check that the vertical angle measured here is also 30°. Thus in some routines there is a choice of plotting positions. This confuses some beginners, and it is advisable to stick closely with the listed steps until confidence develops. Once the process becomes familiar, however, it will be found that the use of these alternative techniques increases the speed of plotting.

Just as structural lines and planes often occur in combination, so too can they be combined in a single, simple plotting routine.

PROBLEM

Given a plane (N 0, 45 W), and a line in that plane (31, N 36 W), plot both features on the stereonet.

VISUALIZATION

The flattened hand with a pencil held against it in

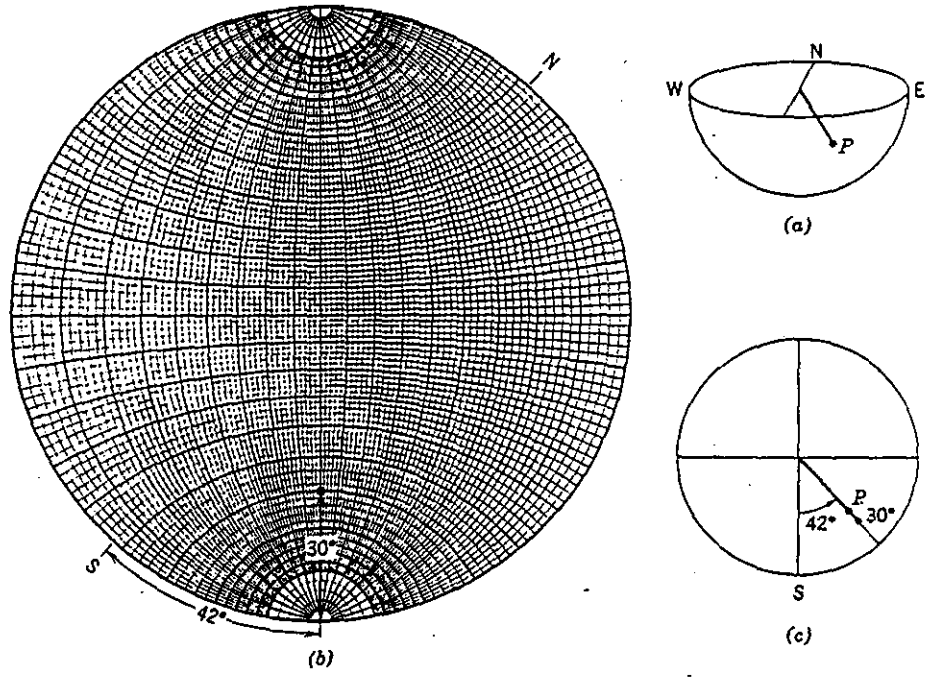

FIGURE 11.6 Stereographic plot of a line. (*a*) Perspective view of the inclined line. (*b*) The position of the overlay and net for the actual plot. (*c*) The overlay as it appears after the plot.