struct rect
{
    double x;       // horizontal distance from origin
    double y;       // vertical distance from origin
};

A second way to describe the position of a point is to state how far it is from the origin and in what direction it is (for example, 40 degrees north of east). Traditionally, mathematicians measure the angle counterclockwise from the positive horizontal axis. (See Figure 7.7.) The distance and angle together constitute polar coordinates. You can define a second structure to represent this view of a position:

Figure 7.7. Polar coordinates.

struct polar
{
    double distance; // distance from origin