The beauty of 45 degrees in drawing circles

One of the important characteristics of a forty-five degree angle is its ability to reflect equal size units as shown in this diagram.

Since it is also the diagonal of a square, it is also the key to dividing squares in half.

It can also play an important role in drawing a circle in perspective.

Since one and two point perspective involve some element that can be "true dimension" you can use the 45 degree line to move measurements as needed.

You can also make useful divisions by using parallel lines across an angle. In this case dividing a line by five.