

### Using the Latitude-Longitude Scale

The scale is used to determine latitude and longitude on a 1:24,000 (7 1/2') USGS topographic map. The scale is marked in increments of one second of latitude or longitude.

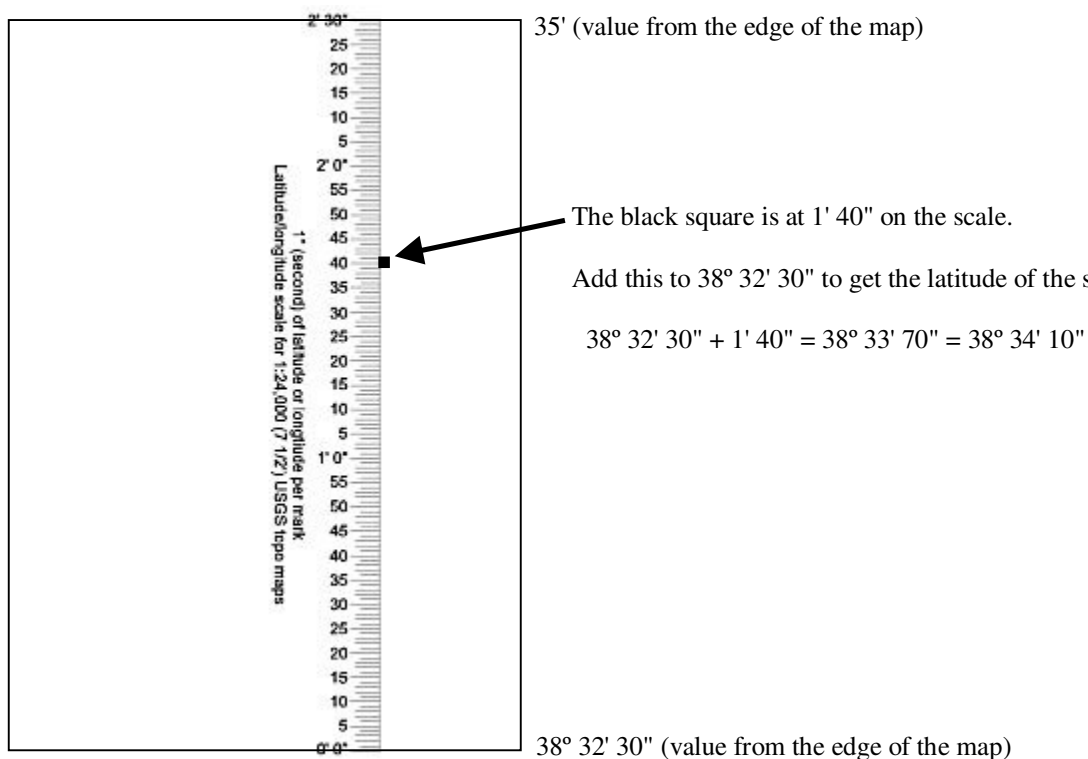
The topo map has latitude and longitude marks every 2 1/2 minutes (2' 30") along the edges (neatlines) of the map. There are black "+" marks on the interior of the map at the intersections of the edge marks.

To use the scale, first draw lines on the map connecting the lat/lon marks.

#### 1. To determine latitude.

The scale is drawn to exactly match 2 1/2 minutes (2' 30") of latitude on the map. Printers and copiers may reproduce the scale slightly off.

- Place the 0' 0" end of the scale on the first latitude line below (south) of the point whose position is desired. This will locate the 2' 30" end of the scale on the latitude line above (north) of the point.
- Keeping the end marks on the latitude lines, slide the scale until the edge is next to the point.
- Note the scale value at the point.
- Add the scale value to the lower (south) latitude.



## 2. To determine longitude.

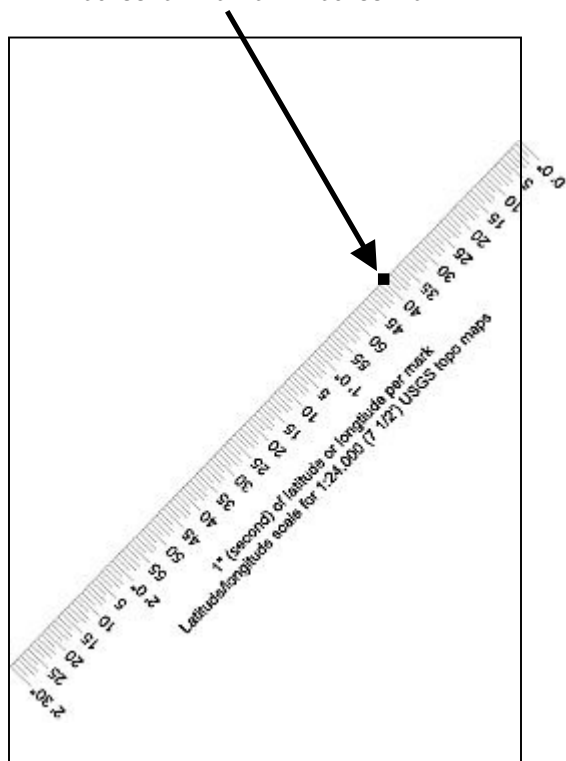
Lines of longitude (meridians) converge at the poles, so the longitude lines on the map are not parallel. They are also closer together than the lines of latitude (parallels), so the scale is longer than the spacing of the longitude lines. The scale must be placed at an angle on the map.

- Place the 0' 0" end of the scale on the first longitude line right (east) of the point whose position is desired.
- Rotate the scale, keeping the 0' 0" mark on the right (east) longitude line until the 2' 30" mark is on the first longitude line left (west) of the point. The scale will be at an angle relative to the longitude lines.
- Keeping the end marks on the latitude lines, slide the scale until the edge is next to the point.
- For points near the top and bottom of the map, the longitude lines may have to be extended past the map borders.
- Note the scale value at the point.
- Add the scale value to the right (east) longitude.

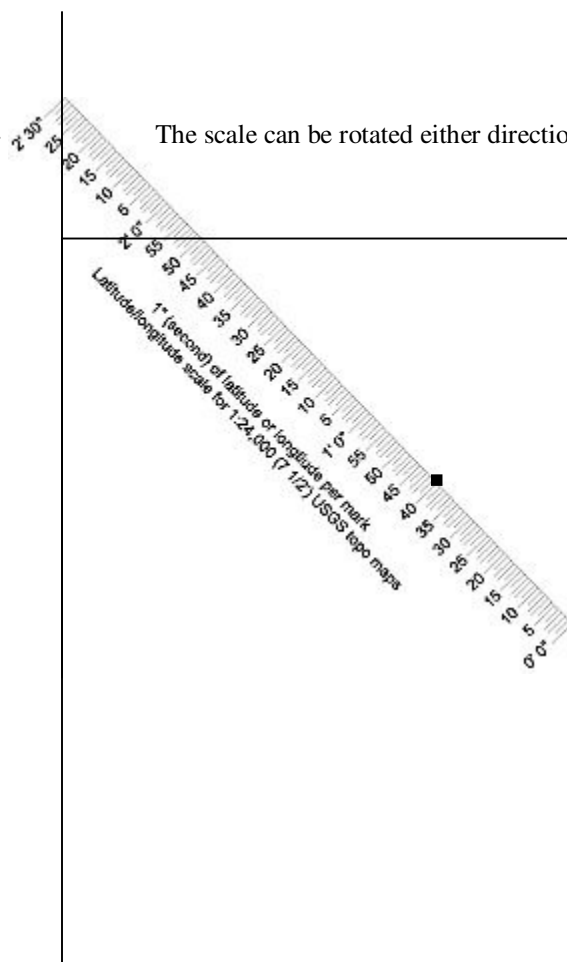
The black square is at 0' 40" on the scale.

Add this to 106° 55' to get the longitude of the square.

$$106^{\circ} 55' 0'' + 0' 40'' = 106^{\circ} 55' 40''$$

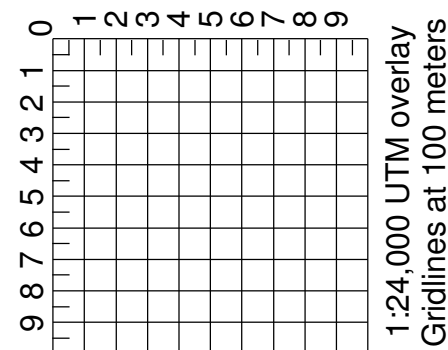
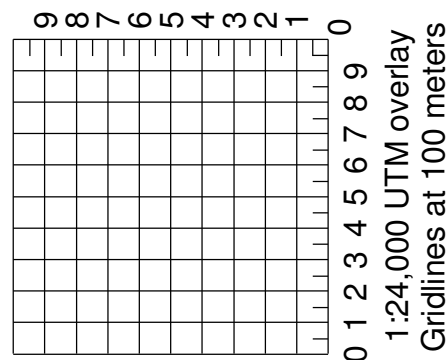
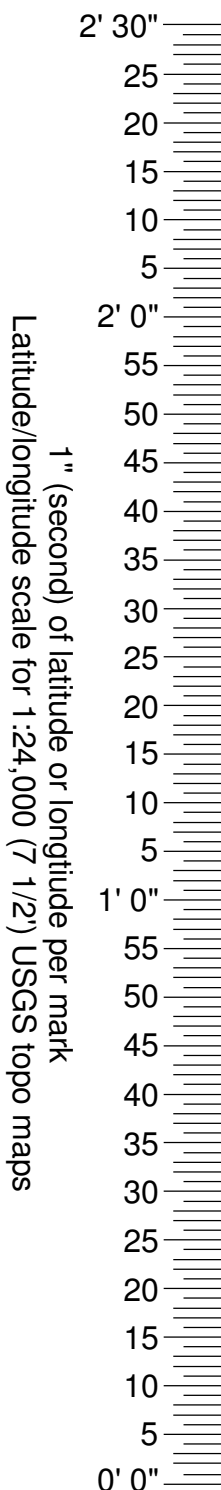
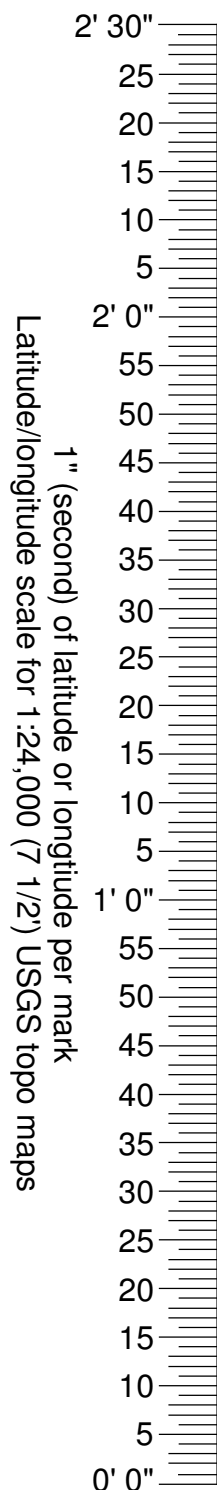


57' 30" values from the edge of the map 106° 55'



57' 30" values from the edge of the map 106° 55'

NOTE: Not all lines may be visible on screen. However, all lines will print.



Before printing check that  
printer is set to 100%, not  
scale to fit or size to fit.

