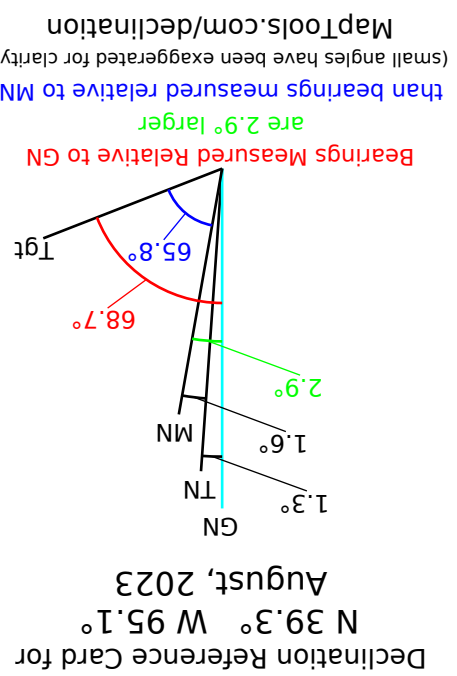
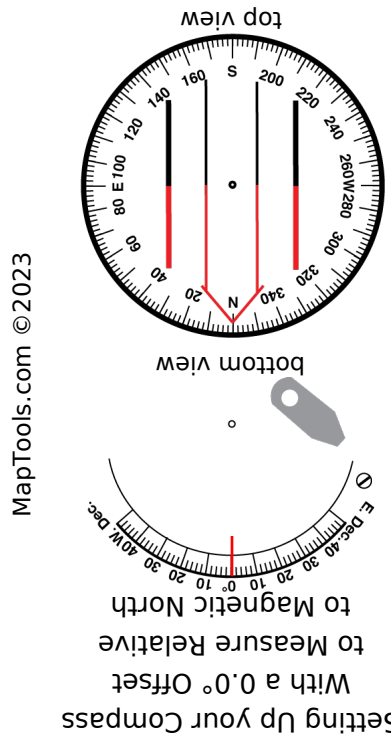
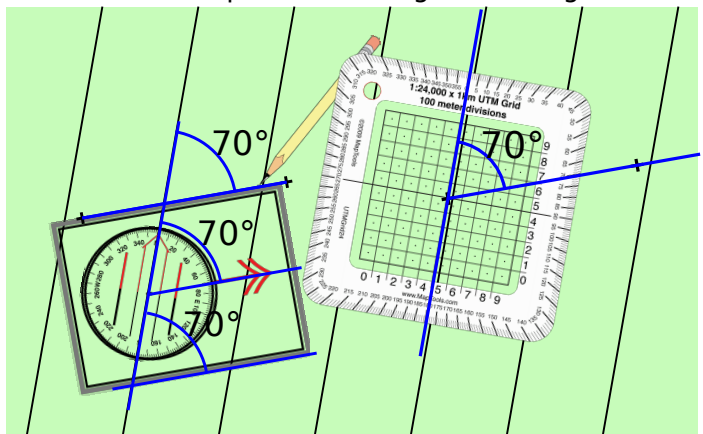


Tell a friend about...  
 MapTools.com/declination  
 Custom Declination Reference Cards  
 "everything you need to know about North References"

MapTools.com  
 Tools for plotting coordinates  
 Information for learning to be a better navigator



Example of Plotting or Measuring Bearings on the Map Using Magnetic North as the North Reference  
 In this example the bearing is 70° Magnetic



- Rotate the compass dial so that 70° is at the index line.
- We're not using the magnetic needle in our compass.
- Instead we are aligning the parallel lines, in the compass capsule, with the Magnetic North reference lines on the map.  
 (The Magnetic North angle has been exaggerated for clarity)



Free Customized Declination Reference Sheet  
 from MapTools.com/declination  
 N 39.3° W 95.1° North Refs: Up=G, Plot=M, Compass=M

B

B

**Folding and cutting instructions**

- #1 Turn the sheet over, fold in half on the dotted line, so the letter "A's" touch.
- #2 Fold the sheet in half again on the #2 fold line, so the letter "B's" touch.
- #3 Cut the sheet using the marks at the #3 cut line.
- #4 Cut the sheet using the marks at the #4 cut line.

#2 fold

Compass and Map Plotting both use Magnetic North. No conversion is required.

Magnetic Bearing to Map (G)  
Grid = Magnetic Bearing + 2.9°  
Map (G) to Magnetic Bearing  
Magnetic Bearing = Grid - 2.9°

### Local Magnetic Anomalies

In some areas there may be significant localized magnetic fields typically caused by magnetic rock deposits such as iron ore or lava flows. 3-4 degrees of anomalous declination is common near these areas. In extreme cases a compass may be rendered useless.

It is a good idea to confirm the local declination by comparing compass sighted and map plotted bearings between two known points.

Red lines show Magnetic Declination (Magnetic - > True)

