Bearing

The bearing system is of two types - Whole circle bearing and reduced bearing. We can convert from one system to another.

Whole Circle Bearing (WCB)

- ✓ Bearings are measured clockwise from north of reference meridian.
- ✓ It is also known as the Azimuthal Bearing
- ✓ It varies from 0 degrees to 360 degrees in the clockwise direction
- ✓ North will be zero degrees; East will be 90 degrees; South will be 180 degrees and West will be 270 degrees.
- ✓ Prismatic compass uses the WCB system.

Reduced Bearing (RB)

- ✓ Bearings are measured either clockwise/anti-clockwise from north/south whichever is close to the line.
- ✓ It is also known as Quadrantal Bearing (QB)
- ✓ Angles vary from 0 degrees to 90 degrees
- ✓ It is measured from either clockwise/anti-clockwise from north/south (If the line is closer to south and going towards west, it is read as Sβ°W)
- ✓ Four quadrants are possible namely NE, SE, SW and NW
- ✓ Surveyor's compass used RB system

Difference

- The horizontal angle made by a line with the magnetic north in the clockwise direction is the whole circle bearing of the line.
  The horizontal angle made by a line with the magnetic north or south (whichever is closer from the line) in the eastward or westward direction is the Quadrantal Bearing or Reduced Bearing of the line
- Only the magnetic north line is considered as reference line in whole circle bearing system. Both magnetic north and south lines are considered as reference line in quadrantal bearing system.
- The cloclwise angle from the reference line is Only taken
  Both cloclwise and anticloclwise angle from the reference line is Only taken
- The value of the whole circle bearing varies from 0° to 360°
  The value of the reduced bearing varies from 0° to 90°
- Example: 26°, 121°, 245°, 350° etc.
  Example: N26°E, S59°E, S65°W, N10°W etc.