where:

LAT1 & LONG1 = coordinates of one location in decimal degrees
LAT2 & LONG2 = coordinates of second location in decimal degrees
LATM   = middle latitude between points
LATK   = kilometres per degree of latitude difference
LONGK   = kilometres per degree of longitude difference
LAT   = north-south distance in kilometres
LONG   = east-west distance in kilometres, and
DIST   = distance between two reference points in kilometres

In computing the above, sufficient decimal figures shall be used
to determine the distance to the nearest kilometre.

2.   Calculation of Azimuth

In some instances, it is necessary to calculate the angle or azimuth
between true north and the connecting radial from one reference point
to another.

2.1   Convert latitude and longitude into degrees and decimal parts of a
degree.

2.2   Determine the arc length in degrees between the two reference
locations.

$$d = \cos^{-1} [\sin(LAT2)\ \sin(LAT1) + \cos(LAT2)\ \cos(LAT1)\ \cos(LONG1-LONG2)]$$

2.3   Calculate the azimuth. (If the second location is west of the initial
location, subtract the result from 360°; i.e., 360 − AZM).

$$AZM = \cos^{-1} \left[\frac{\sin(LAT2) - \sin(LAT1)\ \cos(d)}{\cos(LAT1)\ \sin(d)} \right]$$

where:

LAT1 & LONG1 = coordinates of initial location in decimal degrees;
LAT2 & LONG2 = coordinates of second location in decimal degrees;
d   = arc length between locations in decimal degrees;
AZM   = angle between true north (0 degrees) and the
               connecting radial in decimal degrees in a clockwise
               direction.

In computing the above, sufficient decimal figures shall be used to
determine the azimuth to the nearest degree.