

Geodetic Forward Computation

(Using Differential Geometry Elements)

Geodetic Forward Computation
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Reference ellipsoid: GRS80

Semimajor axis of ellipsoid = 6378137.000 meters

Reciprocal flattening of ellipsoid = 298.2572221008827

Beginning Point:

Latitude = 42 12 32.567850

Longitude = 238 15 09.829470

Azimuth(N) = 327 50 23.180000

CC = -2518487.1898 m

Dist = 5993.7056 m

DS = 599.3706 m

Section Number 1

Latitude = 42 12 32.567850

Longitude = 238 15 09.829470

Half Dphi = 8.222457 sec

Mid point = 42 12 40.790307

Azimuth = 327 50 18.507621

Latitude = 42 12 49.012524

Longitude = 238 14 55.920125

Azimuth = 327 50 13.834769

M1 = 6364263.0405 m

N1 = 6387795.0250 m

MX = 6364265.5837 m

NX = 6387795.8758 m

Dphi = 16.444674 sec

Dlam = -13.909345 sec

Section Number 2

Latitude = 42 12 49.012524

Longitude = 238 14 55.920125

Half Dphi = 8.222217 sec

Mid point = 42 12 57.234741

Azimuth = 327 50 9.161306

Latitude = 42 13 05.456717

Longitude = 238 14 42.008776

Azimuth = 327 50 4.487370

M1 = 6364268.1269 m

N1 = 6387796.7267 m

MX = 6364270.6700 m

NX = 6387797.5775 m

Dphi = 16.444192 sec

Dlam = -13.911350 sec

Section Number 9

Latitude = 42 14 44.111748

Longitude = 238 13 18.498549

Half Dphi = 8.220529 sec

Mid point = 42 14 52.332277

Azimuth = 327 49 3.676352

Latitude = 42 15 0.552564

Longitude = 238 13 4.573151

Azimuth = 327 48 58.994818

M1 = 6364303.7293 m

N1 = 6387808.6380 m

MX = 6364306.2722 m

NX = 6387809.4888 m

Dphi = 16.440817 sec

Dlam = -13.925398 sec

Section Number 10

Latitude = 42 15 0.552564

Longitude = 238 13 4.573151

Half Dphi = 8.220288 sec

Mid point = 42 15 8.772852

Azimuth = 327 48 54.312673

Latitude = 42 15 16.992898

Longitude = 238 12 50.645744

Azimuth = 327 48 49.630054

M1 = 6364308.8151 m

N1 = 6387810.3396 m

MX = 6364311.3580 m

NX = 6387811.1903 m

Dphi = 16.440334 sec

Dlam = -13.927407 sec

Increments used for following computed position = 1000

Latitude = 42 15 16.992898

Longitude = 238 12 50.645744

Azimuth = 327 48 49.630054