

TANGENT CONES

1. Given a sphere of radius 10 and a projection cone tangent to that sphere at latitude 40° North. Use 0° longitude as the central meridian and its intersection with the projection of the equator as the origin for the rectangular coordinates.

On the developed cone, plot the location of the following points and compute their rectangular coordinates:

30° N, 70° E          and          60° N, 90° W

$$N(y) = \underline{10.6339} \quad N(y) = \underline{15.9037}$$

$$E(x) = \underline{9.6730} \quad E(x) = \underline{-7.0086}$$

2. Given a sphere of radius 10 and a projection cone tangent to that sphere at latitude 30° North. Use 0° longitude as the central meridian and its intersection with the projection of the equator as the origin for the rectangular coordinates.

On the developed cone, plot the location of the following points and compute their rectangular coordinates:

20° N, 50° E          and          50° N, 105° W

$$N(y) = \underline{5.7982} \quad N(y) = \underline{14.7657}$$

$$E(x) = \underline{8.0652} \quad E(x) = \underline{-10.8537}$$