

SECANT CONES

1. Given a sphere of radius 10 and a projection cone that cuts the sphere at latitudes 30° North and 60° 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:

45° N, 30° E and 70° N, 45° W

$$N(y) = \underline{10.3138} \quad N(y) = \underline{14.9382}$$

$$E(x) = \underline{3.4951} \quad E(x) = \underline{-2.7180}$$

2. Given a sphere of radius 10 and a projection cone that cuts the sphere at latitudes 30° North and 70° 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:

45° N, 100° E and 55° N, 120° W

$$N(y) = \underline{17.0666} \quad N(y) = \underline{19.3211}$$

$$E(x) = \underline{8.4702} \quad E(x) = \underline{-7.0588}$$