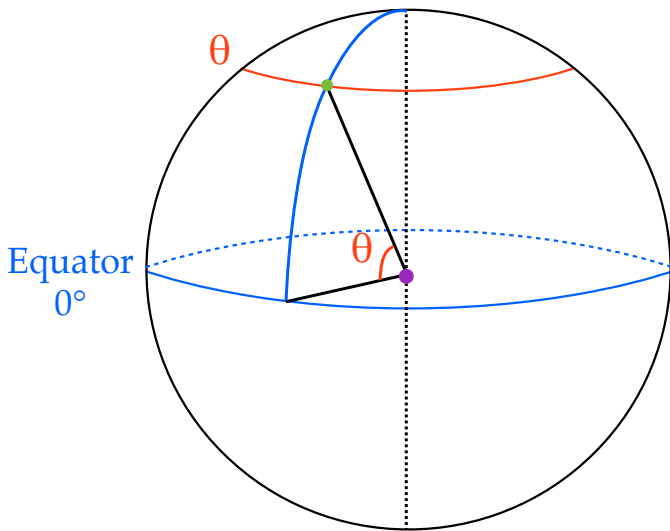


Latitude

Horizontal Lines wrapping around the earth.

The **angle formed** by a ray drawn from the **center** of Earth to the **Equator** and a ray drawn from the **center** of Earth to the **location**



Latitude

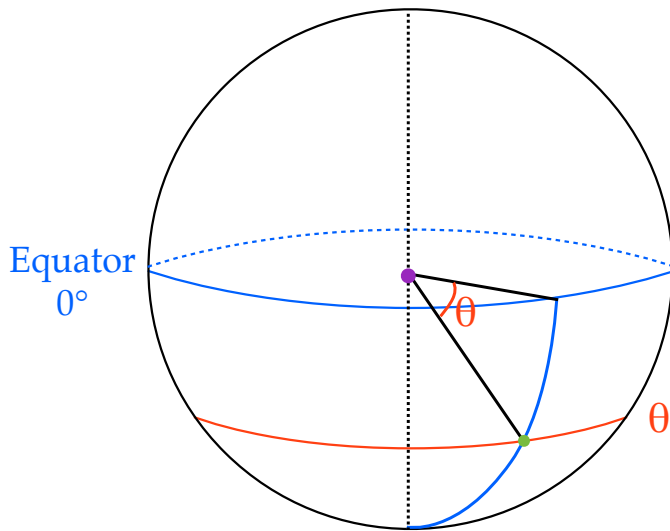
Horizontal Lines wrapping around the earth.

The **angle formed** by a ray drawn from the **center** of Earth to the **Equator** and a ray drawn from the **center** of Earth to the **location**

Latitude

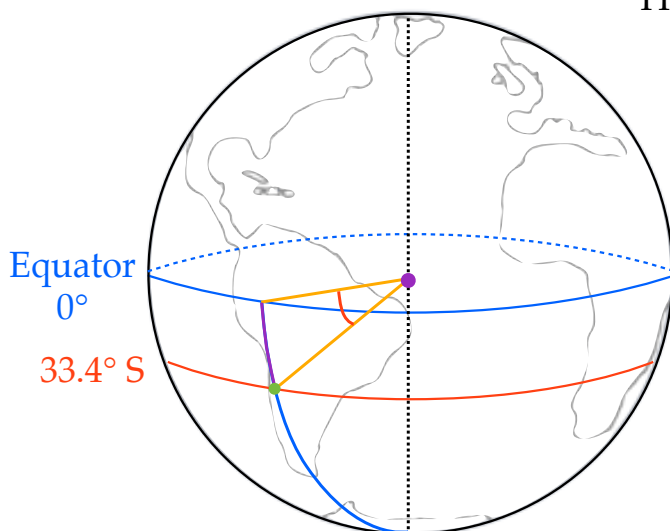
Horizontal Lines wrapping around the earth.

The **angle formed** by a ray drawn from the **center** of Earth to the **Equator** and a ray drawn from the **center** of Earth to the **location**



How **far** is **Santiago, Chile** (**33.4° south latitude**) from the **equator**?

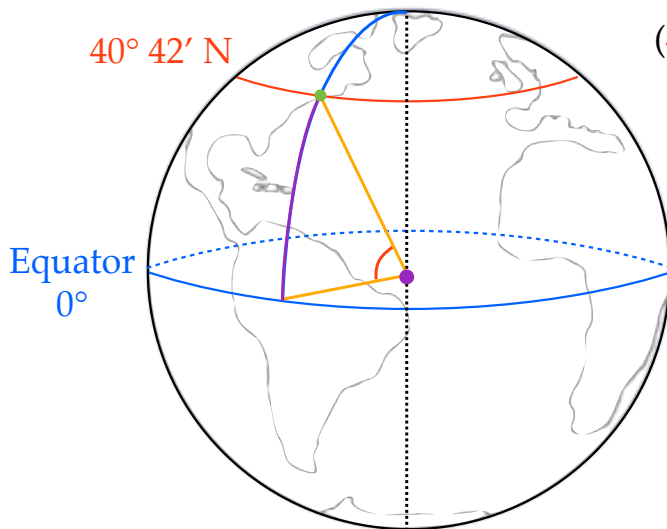
$$s = r \cdot \theta$$



The **radius** of Earth is **3963 miles**

How far is New York, New York
($40^{\circ} 42'$ north latitude) from the equator?

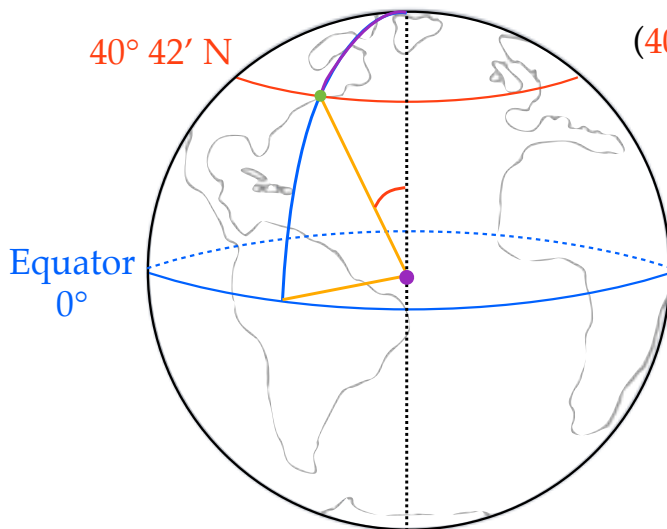
$$s = r \cdot \theta$$



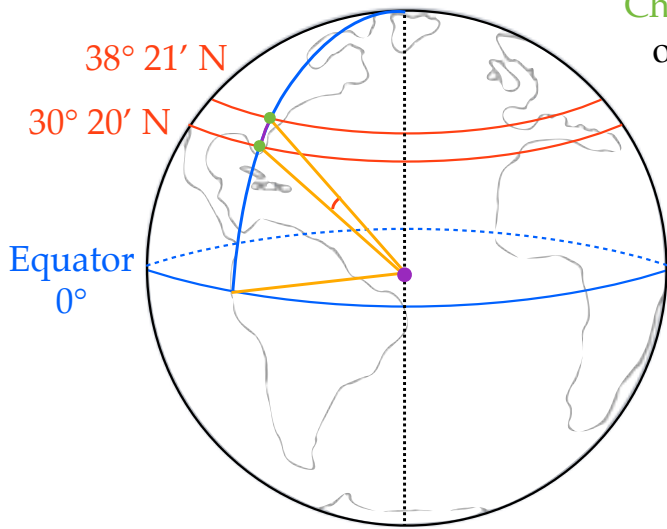
The radius of Earth is 3963 miles

How far is New York, New York
($40^{\circ} 42'$ north latitude) from the north pole?

$$s = r \cdot \theta$$



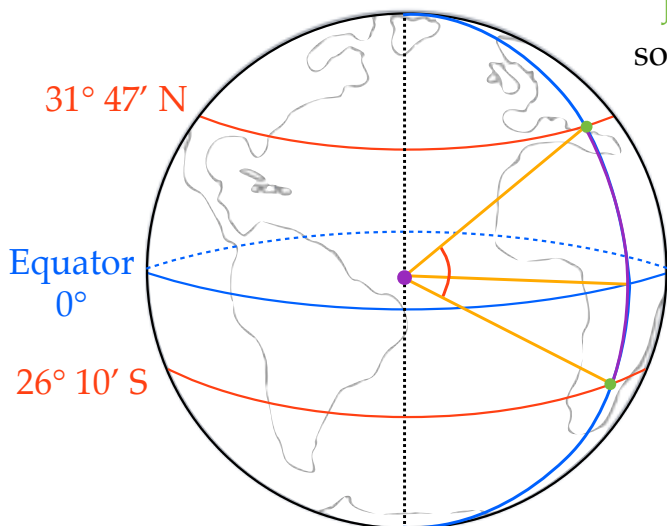
The radius of Earth is 3963 miles



Charleston, West Virginia ($38^{\circ} 21' \text{ N}$) is due north of Jacksonville, Florida ($30^{\circ} 20' \text{ N}$). How far is Charleston from Jacksonville?

$$s = r \cdot \theta$$

The radius of Earth is 3963 miles



Johannesburg, South Africa ($26^{\circ} 10' \text{ S}$) is due south of Jerusalem, Israel ($31^{\circ} 47' \text{ N}$). How far is Johannesburg from Jerusalem?

$$s = r \cdot \theta$$

The radius of Earth is 3963 miles