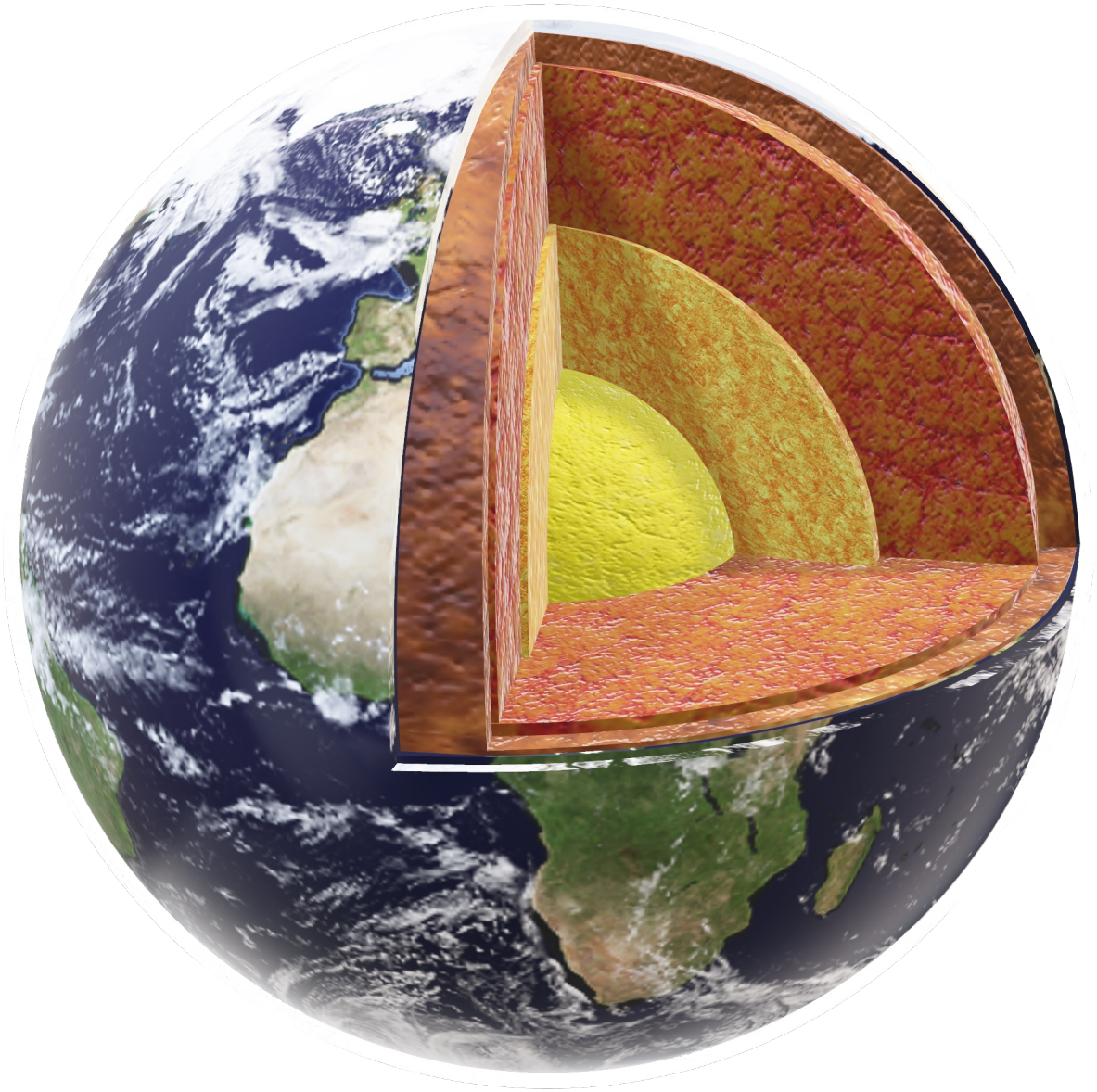
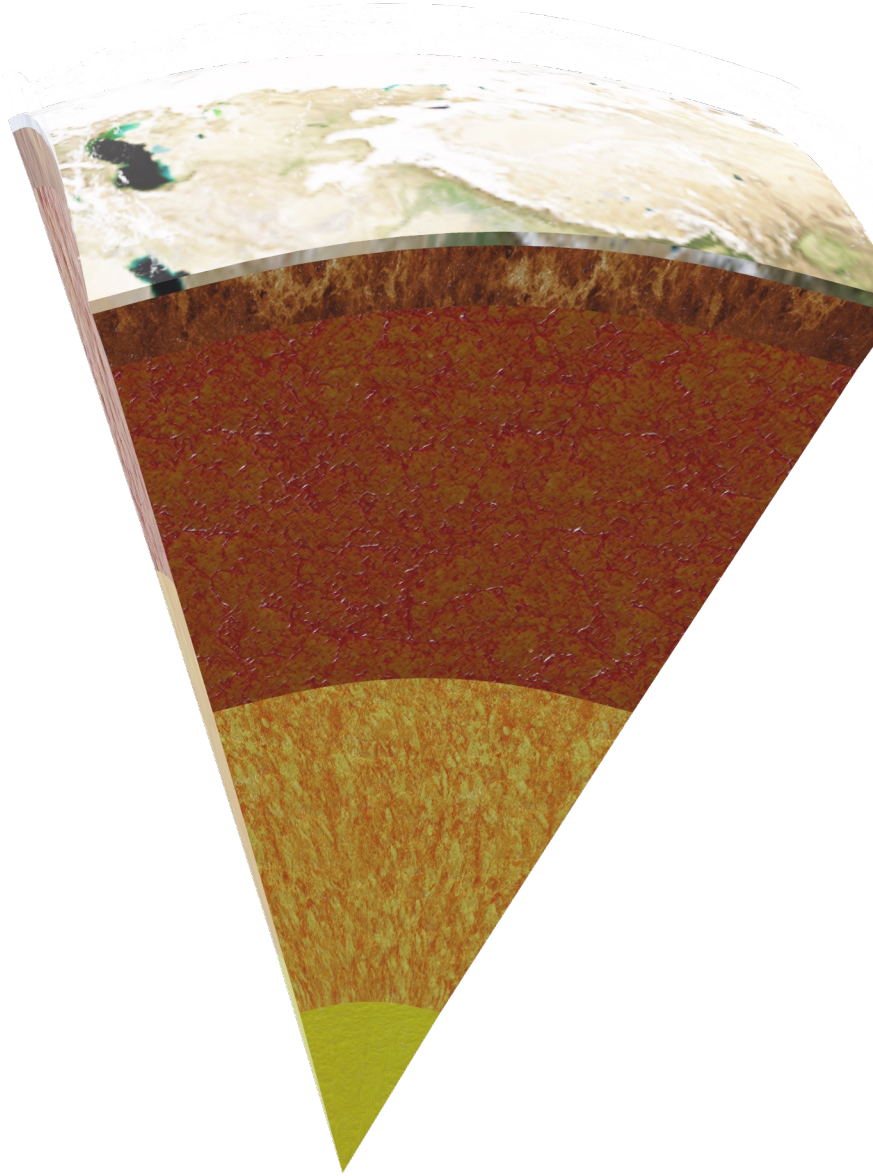
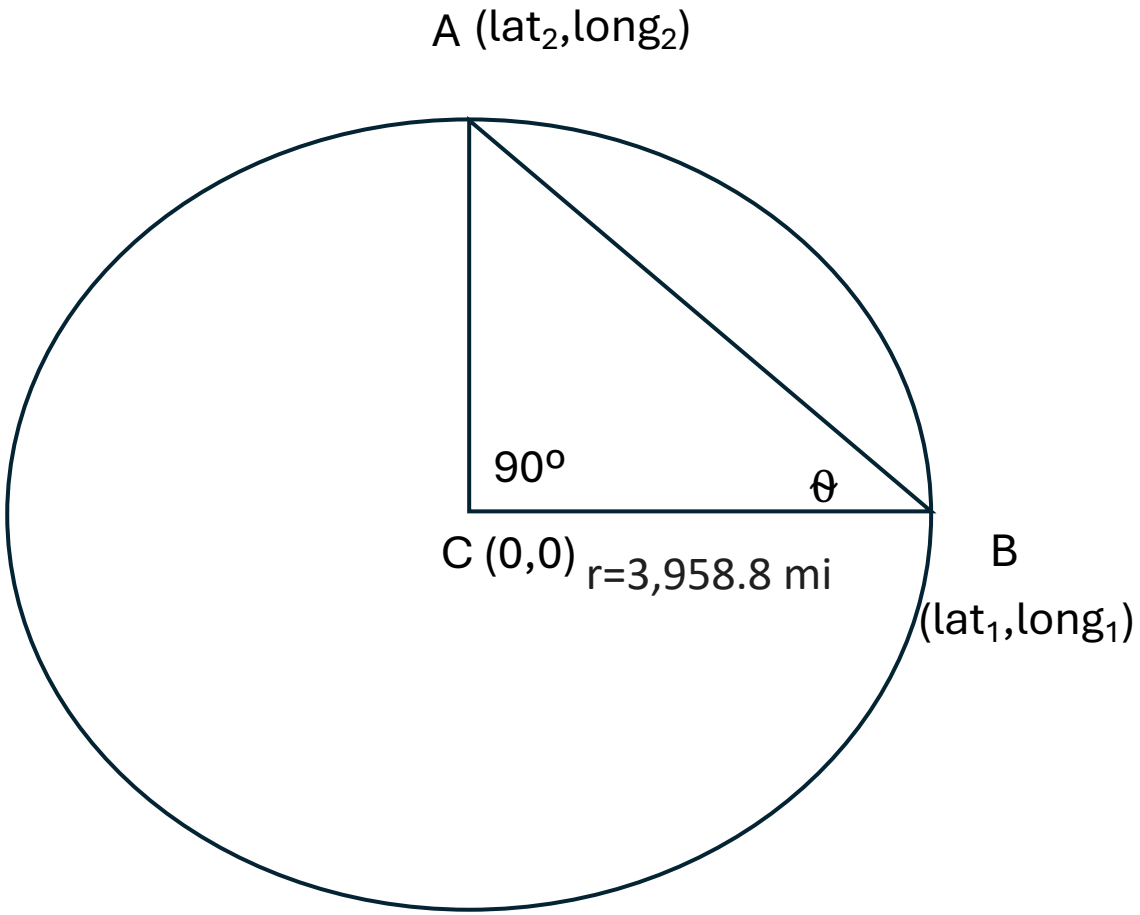
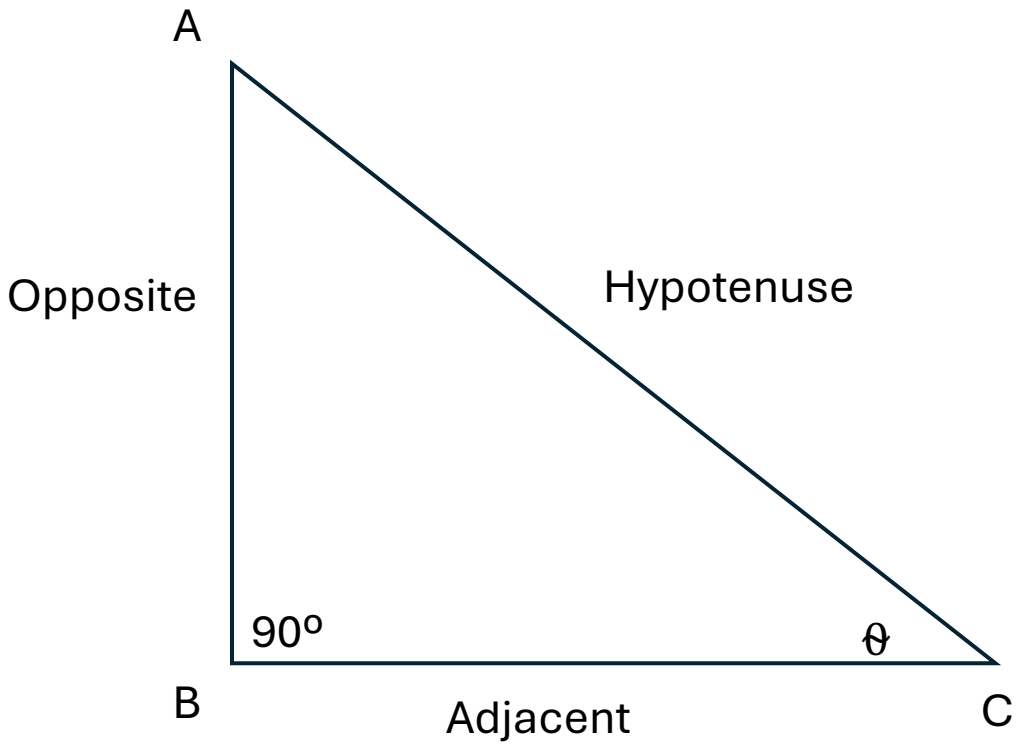






$$d = 2r \cdot \arcsin\left(\sin^2(2\text{latitude}_2 - \text{latitude}_1) + \cos(\text{latitude}_1) \cdot \cos(\text{latitude}_2) \cdot \sin^2(2\text{longitude}_2 - \text{longitude}_1)\right)$$

- **d** = Distance between two points (in miles)
- **r** = Earth's radius (3,959 miles)
- **latitude_1, latitude_2** = Latitudes of the two points (in radians)
- **longitude_1, longitude_2** = Longitudes of the two points (in radians)



Function	Ratio	Reciprocal
Sin (θ)	= opposite / hypotenuse	csc(θ) =1/Sine(θ)
Cos(θ)	= adjacent / hypotenuse	sec(θ) =1/Cos (θ)
Tan (θ)	= opposite / adjacent	cot(θ) =1/Tan (θ)