- Poles, great circles, small circles, great arcs, small arcs
- Spherical triangles: points, sides, angles
  - Radius?
- Length of the great circle arc
- Length of the small circle arc
- Terrestrial coordinate system:
  - latitude and longitude – origin of the names?
  - parallels and meridians; equator and principal meridian
  - measuring latitude and longitude
  - colatitude
  - distance between two cities at the same latitude
  - nautical miles and knots
- Fundamental formula of spherical trigonometry
- Try it yourself:
  - Convert $17^{o}35'47"$ into decimal representation.
  - Convert -48.720535^{o} into dms representation.
  - Calculate the length of 1 nautical mile in km (and miles).
  - Calculate the speed of 1 knot in m/s and in km/h (and miles/h).
  - Calculate the arc length of the flight between Philadelphia ($39^{o}57'8.3"$N, $75^{o}9'49.7"$W) and Ljubljana ($46^{o}3'3.9"$N, $14^{o}30'18.5"$E) if the plane flies at an altitude of 12km.