

Study Questions



3. Given that 1 minute of latitude is approximately equal to 1 nautical mile, i.e. 1.852 km, how many significant digits are required after the decimal in the arc-seconds field if a latitude is represented in degrees, arc-minutes and arc-seconds to describe a position that is accurate to 1cm? Note: 1 degree = 60 arc-minutes or ‘minutes’, 1 arc-minute = 60 arc-seconds or ‘seconds’.
4. Assume a spherical earth with radius of 6371km, and an aircraft starts from position 45°N, 120°W (latitude, longitude). It flies at an altitude of 10,000 m with ground speed of 885 km/h for eight hours at a constant true heading of 45°. Where would the aircraft end up? Just give your answer in integer arc-minutes precision.