

Practice looking up sun's declination in the GPS Backup Sun Almanac

Find dec at these dates and times. Give two answers for each one: (A) direct from Sun Almanac, and then answer (B) corrected for leap year cycle (Table at the back of the sun almanac on page 93).

1) 2020, Jan 1, 1300

3) 2022, July 4, 1300

5) 2023, Sep 1, 0950

Minutes of UTC interpolation rules: minutes <20 round down; >40 round up; between 20 and 40 use midpoint.

Backup Sun Almanac Answers followed by [exact Nautical Almanac values]:

1) S $22^{\circ} 58.5'$, 2020 \Rightarrow -12h = 01h = S $23^{\circ} 01.0'$ [S $23^{\circ} 01.0'$]

3) N $22^{\circ} 50.7'$, 2022 \Rightarrow no correction = N $22^{\circ} 50.7'$ [N $22^{\circ} 50.7'$]

5) 0950 time we round to 1000 = N $8^{\circ} 12.6'$, 2023 \Rightarrow -6h, so 0400 = N $8^{\circ} 18.1'$ [N $8^{\circ} 18.0'$]