

**How to find a Gregorian date in any Dozenal Solstice year from 6682 to 6882
(Gregorian 1767 to 2055)**

Where necessary in this discussion, a subscript z indicates counting by dozens, and a subscript d counting by tens. It should be read in conjunction with one or more years' calendar.

The Dozenal Solstice (DS) calendar years differ slightly by the placement of their S-days beyond the $z260$ ($d360$) days of the $z10$ ($d12$) months. Here are the patterns:

A S5 S6 S7 S8 S9 S \bar{Z} (DS leap year)
 B1 S6 S7 S8 S9 S \bar{Z}
 B2 S5 S6 S7 S8 S9

The Gregorian (G) year 1768 (Dozenal Solstice year 6683) has this pattern:
 A mod S4 S5 S6 S7 S8 S9

The following procedure may be used to find the Dozenal Solstice date of a Gregorian date in a target year not posted on this site.

1. Find the Gregorian date's Dozenal Solstice date in the source year.
2. Using the [calendar conversion table](#) for both the source and the target year, determine the S-day pattern, the December start date, and whether the year is a Gregorian leap year.
3. Using the following chart, adjust the date in the target year if necessary.

<u>Issue</u>	<u>Condition</u>	<u>Move the date</u>
(DS) B2 → B1	(DS) S5 < date < 0 \bar{Z} -26	1 day later
(DS) B1 → B2	(DS) 06-01 < date < S \bar{Z}	1 day earlier
(DS) B2 → A	date > (DS) 0 \bar{Z} -26	1 day earlier
(DS) A → B2	date > (DS) 0 \bar{Z} -26	1 day later
(DS) B1 → A	date > (DS) 05-26	1 day earlier
(DS) A → B1	date > (DS) 05-26	1 day later
(G) December start	decreases by 1	1 day later
	increases by 1	1 day earlier
(G) non-leap → leap	date > (G) February $d28$	1 day later
(G) leap → non-leap	date > (G) February $d28$	1 day earlier

Example. The target date is Hallowe'en, October 31, 1912, whose Dozenal Solstice date we want to find. In the source year 2014 (Dozenal Solstice 6849), we find that October 31 is Skorpíos 0Z, or 0Ε-0Z. The above chart gives the following result.

1. From the [calendar conversion table](#), Gregorian 1912 is Dozenal Solstice 6783. The pattern of year 6849 is B2. Year 6783 has the pattern A. Because we are going from B2 to A and the date is after 0Z-26, we move the date one day earlier than it is in 6849.

2. The start date for Dozenal Solstice 6849 is December 21 (2013). For 6783 it is December 22 (1911). Because we are going from December 21 to December 22, increasing by 1, we move the date one day earlier than it is in 6849.

3. Because Gregorian 2014 is not a leap year but 1912 is, and the date October 31 is after February 28, we move the date one day later than it is in 6849.

The result of the three movements above is two days earlier plus one day later. Therefore, October 31, 1912 is one day earlier in Dozenal Solstice 6783 than it is in 6849, i.e. 0Ε-09, not 0Ε-0Z.