## Convert Gregorian Dates to Symmetry010 (ISO leap rule)

1) Sym010 Day Number (SDN) = Day Number in the Gregorian month + Number of Days Before

| Gregorian Month: | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

2) Set the Sym010 year equal to the Gregorian year.
3) From the table below, add the Sym010 New Year Day offset for that year to the SDN:

| Year | offset | Year | offset | Year | offset | Year | offset | Year | offset | Year | offset | Year | offset | Year | offset |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1900 | 0 | 1925 | +3 | 1950 | -1 | 1975 | +2 | 2000 | $-2^{*}$ | 2025 | +2 | 2050 | -2 | 2075 | +1 |
| 1901 | +1 | 1926 | -3 | 1951 | 0 | 1976 | $+3^{*}$ | 2001 | 0 | 2026 | +3 | 2051 | -1 | 2076 | $+2^{*}$ |
| 1902 | +2 | 1927 | -2 | 1952 | $+1^{*}$ | 1977 | -2 | 2002 | +1 | 2027 | -3 | 2052 | $0^{*}$ | 2077 | -3 |
| 1903 | +3 | 1928 | $-1^{*}$ | 1953 | +3 | 1978 | -1 | 2003 | +2 | 2028 | $-2^{*}$ | 2053 | +2 | 2078 | -2 |
| 1904 | $-3^{*}$ | 1929 | +1 | 1954 | -3 | 1979 | 0 | 2004 | $+3^{*}$ | 2029 | 0 | 2054 | +3 | 2079 | -1 |
| 1905 | -1 | 1930 | +2 | 1955 | -2 | 1980 | $+1^{*}$ | 2005 | -2 | 2030 | +1 | 2055 | -3 | 2080 | $0^{*}$ |
| 1906 | 0 | 1931 | +3 | 1956 | $-1^{*}$ | 1981 | +3 | 2006 | -1 | 2031 | +2 | 2056 | $-2^{*}$ | 2081 | +2 |
| 1907 | +1 | 1932 | $-3^{*}$ | 1957 | +1 | 1982 | -3 | 2007 | 0 | 2032 | $+3^{*}$ | 2057 | 0 | 2082 | +3 |
| 1908 | $+2^{*}$ | 1933 | -1 | 1958 | +2 | 1983 | -2 | 2008 | $+1^{*}$ | 2033 | -2 | 2058 | +1 | 2083 | -3 |
| 1909 | -3 | 1934 | 0 | 1959 | +3 | 1984 | $-1^{*}$ | 2009 | +3 | 2034 | -1 | 2059 | +2 | 2084 | $-2^{*}$ |
| 1910 | -2 | 1935 | +1 | 1960 | $-3^{*}$ | 1985 | +1 | 2010 | -3 | 2035 | 0 | 2060 | $+3^{*}$ | 2085 | 0 |
| 1911 | -1 | 1936 | $+2^{*}$ | 1961 | -1 | 1986 | +2 | 2011 | -2 | 2036 | $+1^{*}$ | 2061 | -2 | 2086 | +1 |
| 1912 | $0^{*}$ | 1937 | -3 | 1962 | 0 | 1987 | +3 | 2012 | $-1^{*}$ | 2037 | +3 | 2062 | -1 | 2087 | +2 |
| 1913 | +2 | 1938 | -2 | 1963 | +1 | 1988 | $-3^{*}$ | 2013 | +1 | 2038 | -3 | 2063 | 0 | 2088 | $+3^{*}$ |
| 1914 | +3 | 1939 | -1 | 1964 | $+2^{*}$ | 1989 | -1 | 2014 | +2 | 2039 | -2 | 2064 | $+1^{*}$ | 2089 | -2 |
| 1915 | -3 | 1940 | $0^{*}$ | 1965 | -3 | 1990 | 0 | 2015 | +3 | 2040 | $-1^{*}$ | 2065 | +3 | 2090 | -1 |
| 1916 | $-2^{*}$ | 1941 | +2 | 1966 | -2 | 1991 | +1 | 2016 | $-3^{*}$ | 2041 | +1 | 2066 | -3 | 2091 | 0 |
| 1917 | 0 | 1942 | +3 | 1967 | -1 | 1992 | $+2^{*}$ | 2017 | -1 | 2042 | +2 | 2067 | -2 | 2092 | $+1^{*}$ |
| 1918 | +1 | 1943 | -3 | 1968 | $0^{*}$ | 1993 | -3 | 2018 | 0 | 2043 | +3 | 2068 | $-1^{*}$ | 2093 | +3 |
| 1919 | +2 | 1944 | $-2^{*}$ | 1969 | +2 | 1994 | -2 | 2019 | +1 | 2044 | $-3^{*}$ | 2069 | +1 | 2094 | -3 |
| 1920 | $+3^{*}$ | 1945 | 0 | 1970 | +3 | 1995 | -1 | 2020 | $+2^{*}$ | 2045 | -1 | 2070 | +2 | 2095 | -2 |
| 1921 | -2 | 1946 | +1 | 1971 | -3 | 1996 | $0^{*}$ | 2021 | -3 | 2046 | 0 | 2071 | +3 | 2096 | $-1^{*}$ |
| 1922 | -1 | 1947 | +2 | 1972 | $-2^{*}$ | 1997 | +2 | 2022 | -2 | 2047 | +1 | 2072 | $-3^{*}$ | 2097 | +1 |
| 1923 | 0 | 1948 | $+3^{*}$ | 1973 | 0 | 1998 | +3 | 2023 | -1 | 2048 | $+2^{*}$ | 2073 | -1 | 2098 | +2 |
| 1924 | $+1^{*}$ | 1949 | -2 | 1974 | +1 | 1999 | -3 | 2024 | $0^{*}$ | 2049 | -3 | 2074 | 0 | 2099 | +3 |

4) If the Gregorian month is March or later AND the offset has an asterisk* then add one to the SDN.
5) If the SDN is more than 364 AND the offset is not $+3,+3^{*}$, or $+2^{*}$
then subtract 364 from the SDN and add one to the Sym010 year.
6) If the SDN is zero or negative then subtract one from the Sym010 year and add 364 to the SDN, and furthermore if the offset $=-3$ OR the prior year offset $=+3^{*}$ then add 7 to the SDN.
7) Use following list to convert the SDN to the corresponding Sym010 month and day of month. (The weekday is also shown but is always the same as the actual weekday of the Gregorian date.)

Symmetry Day Number (SDN) to Symmetry010 Date (ISO leap rule)

| SDN | Sym010 | SDN | Sym010 | SDN | Sym010 | SDN | Sym010 | SDN | Sym010 | SDN | Sym010 | SDN | Sym010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Jan 1 Mon | 54 | Feb 24 Fri | 107 | Apr 16 Tue | 160 | Jun 8 Sat | 213 | Aug 1 Wed | 266 | Sep 23 Sun | 319 | Nov |
| 2 | Jan | 55 | Feb 25 Sat | 108 | Apr 17 Wed | 161 | Jun 9 |  | Aug 2 Thu | 267 | Sep 24 Mon | 320 | Nov |
| 3 | Jan 3 | 56 | Feb 26 Sun |  | Apr 1 | 162 | Jun | 215 | Au | 268 | Sep 25 Tue | 321 | Nov |
| 4 | Jan 4 | 57 | Feb 2 | 110 | Apr | 163 | Jun 1 | 216 | Aug 4 Sat | 269 | Sep 26 Wed | 322 | Nov 19 Sun |
| 5 | Jan 5 | 58 | Feb | 111 | Apr |  | Jun 12 Wed | 217 | A | 270 | Sep | 323 | ov 2 |
| 6 | Jan 6 Sat | 59 | Feb 29 Wed | 112 | Apr | 165 | un 13 Th | 218 | Aug 6 Mon | 271 | Sep | 324 | Nov 21 |
| 7 | Jan 7 | 60 | Feb 30 Thu | 113 | Apr | 166 | un | 219 | Aug 7 Tue | 272 | Sep | 325 | Nov 22 Wed |
| 8 | Jan | 61 | Fe | 114 | Apr | 167 | Jun 1 | 220 | A | 273 | Sep | 326 | Nov 23 Thu |
| 9 | Jar | 62 | Mar 1 Sat |  | Ap | 168 | Jun 1 | 221 | A | 274 | Oct 1 Mon | 327 | Nov 24 |
| 10 | Jan 10 | 63 | Mar 2 Sun | 116 | Apr 2 | 169 | Jun 1 | 222 | Au | 275 | Oct 2 Tue | 328 | Nov 25 Sat |
| 11 | Jan 11 | 64 | Mar 3 Mon | 117 | Apr |  | Jun | 223 | Aus | 276 | Oct 3 Wed | 329 | Nov 26 Sun |
| 12 | Jan 12 | 65 | Mar 4 Tue | 118 | Ap |  | Jun 1 | 224 | Aug 12 Sun | 277 | Oct 4 Thu | 330 | ov 27 |
| 13 | Jan 13 | 66 | Mar 5 Wed | 119 | Apr |  | Jun 20 Thu | 225 | Aug 13 Mon | 278 |  | 31 | Nov 28 Tue |
| 14 | Jan 1 | 67 | Mar 6 Thu | 120 | Apr | , | Jun 2 | 226 | Au | 279 | Oct 6 Sat | 332 | ov |
| 15 | Jan | 68 | Mar 7 Fri | 121 | Apr 30 Tue |  | Jun 2 | 227 | Aug 15 Wed | 280 | Oct 7 Sun | 333 | Nov 30 Th |
| 16 | Jan | 69 | Mar 8 Sat | 122 | May 1 Wed |  | 2 | 228 | Au | 281 | Oct 8 Mo |  | Nov 31 Fri |
| 17 | Jan 1 | 70 | Mar 9 Sun | 123 | Ma |  | Jun 2 | 229 | Au | 282 | Oct 9 Tue | 335 | Dec |
| 18 | Jan | 71 | Mar 10 Mon | 124 | M |  | Jun 25 | 230 | Aug 18 Sat | 283 | Oc | 336 | Dec 2 Sun |
| 19 | Jan | 72 | Mar 11 Tue | 125 | M |  | 26 | 231 | Aug | 284 | Oct 11 Thu |  | Dec |
| 20 | Jan 2 | 73 | Mar 12 | 126 | M |  | Jun 2 | 232 | Aug 20 Mon | 285 | Oct 12 Fri | 38 | Dec 4 Tue |
| 21 | Jan 21 | 74 | Mar 13 Thu | 127 | M | 180 | Jun 28 | 233 | Aug 21 Tue | 286 | Oct 13 Sa | 339 | Dec 5 Wed |
| 22 | Jan 22 | 75 | Mar 14 Fri | 128 | Ma | 181 | Jun 2 |  | Aug 22 Wed | 287 | Oct 14 Sun |  | Dec |
| 23 | Jan 23 | 76 | Mar 15 |  | May | 82 | Jun 30 |  | Aug 2 | 288 | Oct 15 Mon |  | Dec 7 Fri |
| 24 | Jan 2 | 77 | Mar 16 Sun | 130 |  | 183 | Jul 1 Mon |  |  | 289 | Oct 16 Tue |  | Dec |
| 25 | Jan 2 | 78 | Mar 17 Mon | 131 | M |  | Jul |  | Aug 2 | 290 | Oct 17 Wed |  | Dec 9 Sun |
| 26 | Jan 2 | 79 | Mar 18 |  | May |  | Jul 3 |  | Aug 2 | 291 | ct 1 |  | Dec |
| 27 | Jan 2 | 80 | Mar 19 We | 133 | Ma |  | Jul 4 | 239 | Aug 27 Mon | 292 | Oct 19 Fri |  | Dec 1 |
| 28 | Jan 2 | 81 | Mar 20 Thu | 134 | M | 187 | Jul 5 |  | Au | 293 | Oct 20 Sat |  | Dec 1 |
| 29 | Jan 2 | 82 | Mar 21 |  | May |  | Jul 6 |  | Aug 29 Wed | 294 | Oct 21 Sun |  | Dec 1 |
| 30 | Jan | 83 | Mar 22 S |  |  |  | Jul 7 Sun |  |  | 295 | Oct 22 Mon |  | Dec 14 Fri |
| 31 | Feb | 84 | Mar 23 Sun | 137 | Ma |  | Jul 8 | 243 | Aug 31 Fri | 296 | Oct 23 Tue | 349 | Dec |
| 32 | Feb 2 | 85 | Mar 24 Mon | 138 | May |  | Jul 9 |  | Sep 1 | 297 | Oct 2 | 350 | Dec 1 |
| 33 | Feb | 86 | Mar 25 T | 139 | May 18 Sat |  | Jul 10 Wed | 245 | Se | 298 | Oct 25 Thu |  | Dec 1 |
| 34 | Feb | 87 | Mar 26 Wed | 140 | May 19 Sun |  | Jul 1 | 246 | Se | 299 | Oct 26 Fri |  | Dec |
| 35 | Feb | 88 | 27 | 141 | May |  | Jul 1 | 247 | Sep | 300 | Oct | 353 | Dec |
| 36 | Fe | 89 | Mar 28 F |  | Ma |  | Jul 1 |  | Se | 301 | Oct 28 Sun |  | Dec 20 Th |
| 37 | Feb 7 Tue | 90 | Mar 29 Sat |  | Ma |  | Jul 14 | 249 | Sep 6 Thu | 302 | Oct 29 Mon |  | Dec 2 |
| 38 | Feb 8 | 91 | Mar 30 |  | May | 197 | Jul 15 | 250 | Sep | 303 | Oct 30 | 356 | Dec |
| 39 | Feb | 92 | Ap |  | Ma |  | Jul 16 Tue |  | Sep |  | Nov 1 Wed |  | De 23 |
| 40 | Feb | 93 | Apr 2 |  | May |  | Jul 17 Wed | 252 | Sep 9 Sun | 305 | Nov 2 Thu | 358 | Dec 24 |
| 41 | Feb 1 | 94 | Apr 3 |  | May | 200 | Jul 18 | 253 | Sep | 306 | Nov 3 Fri | 359 | Dec 2 |
| 42 | Feb 12 | 95 | Apr |  | May |  | Jul 1 |  | Sep | 307 | Nov 4 Sat |  | Dec 26 Wed |
| 43 | Feb 13 Mon | 96 | Apr 5 |  | May |  | Jul 20 |  | Sep 12 Wed | 308 | Nov 5 Sun |  | Dec 27 |
| 44 | Feb | 97 | Apr | 50 | May 29 Wed | 203 | Jul 21 | 256 | Sep 13 Thu | 309 | Nov | 62 | Dec 2 |
| 45 | Feb 15 | 98 | Apr 7 | 15 | Ma |  | Jul 22 M |  | Sep | 310 | Nov 7 Tue |  | c 29 |
| 46 | Feb | 99 | Apr 8 Mon | 152 | May 31 F |  | Jul 23 Tue | 258 | Sep 15 | 311 | Wed | 364 | c 3 |
| 47 | Feb 17 | 100 | Apr 9 | 153 | Jun 1 Sat |  | Jul 2 | 259 | Sep 16 Sun | 312 | Nov 9 Thu |  | Irv 1 |
| 48 | Feb 18 | 101 | Apr 10 | 154 | Jun 2 Sun |  | Jul 25 Th | 260 | Sep 17 Mon | 313 | v 10 |  | Irv 2 T |
| 49 | Feb 19 | 102 | Apr 11 | 15 | Jun 3 Mon |  | Jul 26 Fri |  | Sep 18 Tue | 314 | v 1 |  | Irv 3 Wed |
| 50 | Feb | 103 | Apr 12 | 156 | Jun 4 | 209 | Jul 27 Sa | 262 | Sep 19 Wed | 315 | ov 12 | 368 | Irv 4 |
| 51 | Feb 21 | 104 | Apr 13 Sat | 15 | Jun 5 Wed | 210 | Jul 28 Sun | 263 | Sep 20 Thu | 316 | ov 13 Mon | 369 | Irv 5 Fri |
| 52 | Feb 22 Wed | 105 | Apr 14 Sun | 158 | Jun 6 Thu | 211 | Jul 29 Mon |  | Sep 21 Fri | 317 | Nov 14 T |  | Irv 6 S |
| 53 | Feb 23 Thu | 06 | Apr 15 Mon |  | Jun 7 Fri | 212 | ul 30 Tue |  | Sep 22 Sat | 318 | Nov 15 Wed | 371 | Irv 7 Sun |

