

Calendar Types

Gregorian

The Gregorian calendar was proclaimed by Pope Gregory XIII and took effect in most Catholic states in 1582, in which October 4, 1582 of the Julian calendar was followed by October 15 in the new calendar, correcting for the accumulated discrepancy between the Julian calendar and the equinox as of that date. When comparing historical dates, it's important to note that the Gregorian calendar, used universally today in Western countries and in international commerce, was adopted at different times by different countries. Britain and her colonies (including what is now the United States), did not switch to the Gregorian calendar until 1752, when Wednesday 2nd September in the Julian calendar dawned as Thursday the 14th in the Gregorian. Days are considered to begin at midnight. The average length of a year in the Gregorian calendar is 365.2425 days

Hebrew

The Hebrew (or Jewish) calendar attempts to simultaneously maintain alignment between the months and the seasons and synchronize months with the Moon—it is thus deemed a “*luni-solar calendar*”. In addition, there are constraints on which days of the week on which a year can begin and to shift otherwise required extra days to prior years to keep the length of the year within the prescribed bounds. This isn't easy, and the computations required are correspondingly intricate.

The average length of a month is 29.530594 days, extremely close to the mean *synodic month* (time from new Moon to next new Moon) of 29.530588 days. Such is the accuracy that more than 13,800 years elapse before a single day discrepancy between the calendar's average reckoning of the start of months and the mean time of the new Moon. The average length of a year is 365.2468 days.

Islamic

The Islamic calendar is purely lunar and consists of twelve alternating months of 30 and 29 days, with the final 29 day month extended to 30 days during leap years. Days are considered to begin at sunset. The calendar begins on Friday, July 16th, 622 C.E. in the Julian calendar, Julian day 1948439.5, the day of Muhammad's flight from Mecca to Medina, with sunset on the preceding day reckoned as the first day of the first month of year 1 A.H.—“*Anno Hegire*”—the Arabic word for “separate” or “go away”. The names for the days are just their numbers: Sunday is the first day and Saturday the seventh; the week is considered to begin on Saturday.

Since the calendar is fixed to the Moon, not the solar year, the months shift with respect to the seasons, with each month beginning about 11 days earlier in each successive solar year. The calendar presented here is the most commonly used civil calendar in the Islamic world; for religious purposes months are defined to start with the first observation of the crescent of the new Moon.

Mayan

The Mayan calendar is based on serial counting of days without means for synchronizing the calendar to the Sun or Moon which are roughly comparable to the solar year. Also distinctly modern in appearance is that days and cycles count from zero, not one as in most other calendars, which simplifies the computation of dates, and that numbers as opposed to names were used for all of the cycles. The Mayans believed at the conclusion of *eachictum* cycle of about 7,885 years the universe is destroyed and re-created. Those with apocalyptic inclinations will be relieved to observe that the present cycle will not end until Columbus Day, October 12, 4772 in the Gregorian calendar.