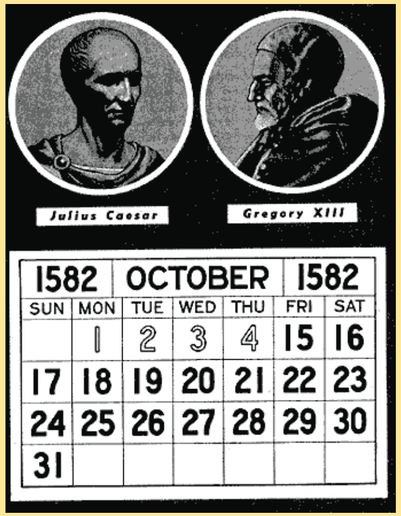
Ancient and modern calendars

Julius Caesar changed the Roman year to his own Julian calendar



Pope Gregory XIII

Fast facts

*Length of the tropical year, defined as the average interval between vernal equinoxes is 365 days, 5 hours, 49 minutes (365.2424 Universal days).. This calendar year was the objective of the Gregorian calendar reform, which finalised the calendar as we use it today.

* Lengthening of the vernal equinox year over the last two millennia is about 10 seconds (0.0001 universal days per year).Variation of this length in the next few millennia is less than 5 seconds

* The earliest known date of the founding of the Egyptian calendar is 4236 B.C.E.

* Early Greek year was 354 days, with days added,Jewish Year was 354 days, with days added and early Roman year 304 days, amended in 700 C.E. to 355 days.

* The year according to Julius Caesar was 365 days. Also known as The Julian calendar.

* On January 1, 45 B.C.E Caesar changed the Roman year to his own Julian calendar.

* On October 15, 1582, the Gregorian calendar replaced the Julian calendar, in use since 45 BC.

* Length of time the Julian calendar overestimates our calendar year per year, as determined by Pope Gregory was 10 minutes 48 seconds .

October 5-14, 1582 Dates Gregory eliminated to realign his calendar with the solar year

* During 1582-1584 most Catholic countries accepted the Gregorian calendar.

* Protestant Germany accepted the Gregorian calendar,partially in 1700 and fully in 1773.

* In 1752 Great Britain (and the American colonies) accepted the Gregorian calendar.

* Eleven days were eliminated by the British Parliament to realign the old Julian calendar with the Gregorian calendar.

* In 1873 Japan accepted the Gregorian calendar.

* In 1917 (and again in 1940) Russia accepted the Gregorian calendar.

* China accepted the Gregorian calendar system in 1949.

* 1 hour and 20 minutes is the length of time the Gregorian calendar has become misaligned with the vernal equinox over the years since Gregory's reform in 1582.

* By 4th or 5th millennium C.E. the Gregorian calendar will become twelve calendar hours ahead of the astronomer's mean tropical year.Beyond the 7th millennium C.E. the Gregorian calendar will become twelve calendar hours ahead of the mean vernal-equinox year*

In 1972 the Atomic Time replaced Earth Time as the world's official scientific time standard.

Greek Name	Month #	Coptic Name	Gregorian Equivalent
Thoth	1	Thout	September-October
Phaophi	2	Paopi	October-November
Athyr	3	Hathor	November-December
Choiak	4	Koiak	December-January
Tybi	5	Tobi	January-February
Mechir	6	Meshir	February-March
Phamenoth	7	Paremhat	March-April
Pharmouthi	8	Paremoude	April-May
Pachon	9	Pashons	May-June
Payni	10	Paoni	June-July
Epiphi	11	Epip	July-August
Mesore	12	Mesori	August-September
?	13	El Nasii	(Extra 5 or 6 days)

January 1st is the first day of a new year. The first day of the 12th year in the 21st century. The year is 2012 AD. What do the two letters AD stand for? They stand for two Latin words Anno Domini which means 'in the year of the Lord.' This is the 2012th year since the birth of Jesus Christ.

The calendar which is now used worldwide is called the Gregorian Calendar, because it was introduced by Pope Gregory XIII in the 16th century. What was in use earlier was the calendar introduced in 46BC by Julius Caesar, the emperor of Rome. The Julian calendar was found to be not quite accurate; so, it was corrected by the Jesuit astronomer Christopher Clarius and Pope Gregory XIII gave his official seal to the new calendar in 1582. So, it is called the Gregorian Calendar.

This is also the beginning of a new school year. But International Schools start their new school year or academic year in September. Why so late in the year? To be in line with the schools in England and America, because they follow the same course of studies as those schools in England and America.

In those temparate lands - countries north of the Tropic of Cancer - the school year starts in autumn after the long summer vacation. In America they say schools start "in the fall," which means in the autumn when the leaves fall.

In Australia, New Zealand and other countries south of the Tropic of Capricorn, the school year begins in late February or early March, after the summer vacation. It is midsummer now in the southern hemisphere, south of the Tropic of Capricorn.

As I said earlier, this year is 2012 AD. You would have noticed that some years have the letters BC after them. Julius Caesar introduced a calendar in 46 BC. Your history books give the year that the Buddha passed away as 544 BC and that Mahinda Thera came to Lanka in 234 BC.

BC stands for Before Christ. Jesus Christ was born 46 years after the Julian Calendar was introduced. The Buddha passed away 544 years before the birth of Jesus Christ - 2012 plus 544 is 2556; this number of years will be completed on Vesak Day this year, which is the anniversary of the Parinirvana.

The Christian era is calculated from the birth of Jesus Christ, but the Buddhist era from the day the Buddha passed away. An era is a period of time starting from a special event. Hijiri is the Muslim era. It is counted from the year that Prophet Mohammed migrated from Mecca to Medina. This is the 1432nd year of the Hijiri era.

You may have heard of the 'Saka Varsha'. Saka also known as Sali Vaahana was a king who ruled in northwest India, now Pakistan. He must have introduced a new calendar, just as Julius Ceasar did.

The Saka era began in 78 AD. So this year will be Saka Varsha 1934. The Saka Varsha is counted from the day the Sun begins a new cycle of the Zodiac which is on April 13/14 in the Gregorian calendar.

There are calendars other than that now used world-wide, followed by different people for religious purposes or other traditional ceremonies. In these calendars the year doesn't start on January 1st and end on December 31st.

All of you know that our own year - Sinhala and Tamil year begins on April 13/14. It marks the end of one cycle of the sun round the planets and the Sun's entry from Pisces to Aries. Meena to Mesha rashi - to start another cycle. The exact time of the Sun's entry into Mesha rashi is calculated by astrologers, and the public informed, 13/14 is then our New Year's Day. It is also New Year's Day in the Buddhist countries of S.E. Asia. People in Myanmar, Thailand, Cambodia, Laos, Vietnam, all celebrate the dawn of a new year on this day as do the Buddhists in Bangladesh.

The Chinese, wherever they are will be celebrating the new year. Sometime between mid January and mid February.

The Muslim year doesn't start on a fixed date as the months in the year are lunar months.

A lunar month is a period from one new moon to another new moon; so the day varies. In our traditional calendar too the months are lunar months. That's why Vesak is not on the same day every year in the Gregorian calendar.

Ancient people were keen observers of the movement of sun, moon and stars. They were aware of the days getting shorter and the nights longer, and then gradually daylight continuing for longer hours. As long ago as 2000 BC, the Sumerians in Mesopotamia calculated the new year by the new moon nearest to the equinox.

They would have noted the nights getting shorter and the days longer, day by day. The plants were beginning to put out tender shoots, animals waking up from their winter sleep and wild duck and other birds flying back to their homeland. Then came a day when hours of daylight and darkness were equal or almost equal.

That day was the beginning of a new year; and that day may have been the nearest if not the day of the equinox, when the Sun is directly overhead the equator, which is March 21 in the Gregorian calendar.

In the ancient Roman calendar followed for centuries before the birth of Christ, March was the first month of the year, and the year had only 10 months, until the calendar was revised by Julius Ceasar in 46BC and two months added on the suggestion of the Egyptian astronomer Alexander Sosigenes. So March became the third month. In Iran today, the New Year is celebrated on the day of the equinox March 21. As in ancient Rome, in Iran today, the year starts in March in the modern calendar.

Sumana Saparamadu

Gregorian calendar

The Gregorian calendar is the calendar that is used nearly everywhere in the world. A modification of the Julian calendar, it was first proposed by the Calabrian doctor Aloysius Lilius, and was decreed by Pope Gregory XIII, for whom it was named, on February 24 1582 via the papal bull Inter gravissimas. Its years are numbered per the perceived birth year of Jesus Christ, which is labeled the "Anno Domini" era.

This era was created in the 6th century by Roman monk Dionysius Exiguus.

The Gregorian Calendar was devised both because the mean year in the Julian Calendar was slightly too long, causing the vernal equinox to slowly drift backwards in the calendar year, and because the lunar calendar used to compute the date of Easter had grown conspicuously in error as well. The Gregorian solar calendar is an arithmetical calendar. It counts days as the basic unit of time, grouping them into years of 365 or 366 days.

A Gregorian year is divided into twelve "months".

Despite the name these are not synchronised with the phases of the Moon; the terminology derives from the Roman calendar that preceded the Julian calendar. The twelve months are of irregular lengths.

A calendar date is fully specified by the year (numbered by some scheme beyond the scope of the calendar itself), the month (identified by name or number), and the day of the month (numbered sequentially starting at 1).The leap years are all years divisible by 4, with the exception that those divisible by 100, but not by 400, are common years. These 366-day years add a 29th day to February, which normally has 28 days. The intercalary day in a leap year is known as a leap day. Since Roman times 24 February (bissextile) was counted as the leap day, but nowadays February 29 is regarded as the leap day in most countries. This year is a leap year.

The calendar repeats completely every 146,097 days, the cycle consisting of 400 years, of which 303, the "common years", have 365 days, and 97, the leap years, have 366 days.

This gives an average year length of exactly 365.2425 days.

Although the calendar year runs from January 1 to December 31, sometimes year numbers are based on a different starting point within the calendar. Confusingly, the term "Anno Domini" is not specific on this point, and actually refers to a family of year numbering systems with different starting points for the years.

Facts and pix: Internet

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