The Roman calendar

The first Roman calendar was one of Greek origin: a lunar calendar with full months of 30 days and hollow months of 29 days, beginning with the month that contained the spring equinox. As full months were considered powerful and hollow months, well, hollow, there were periodically moves to increase the lengths of these months. This desire was apparently greater than the need to synchronize the passing of months with the Moon’s phases, so that by the 7th c. BCE, under the great Roman king Numa Pompilius, the calendar included no months with 29 days, 6 months of 30 days and 4 months of 31! This gave a calendar with only $6 \times 30 + 4 \times 31 = 304$ days; the remaining 61 days covered the winter season before the spring equinox and belonged to no month:

<table>
<thead>
<tr>
<th>Month</th>
<th>Days</th>
<th>Month</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martius</td>
<td>31</td>
<td>Sextilis</td>
<td>30</td>
</tr>
<tr>
<td>Aprilis</td>
<td>30</td>
<td>September</td>
<td>30</td>
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<tr>
<td>Maius</td>
<td>31</td>
<td>October</td>
<td>31</td>
</tr>
<tr>
<td>Iunius</td>
<td>30</td>
<td>November</td>
<td>30</td>
</tr>
<tr>
<td>Quintilis</td>
<td>31</td>
<td>December</td>
<td>30</td>
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Note that from Qunitilis on, the months had number-based names.
Numa reformed the calendar by removing a day from each of the months with 30 (odd numbers were always considered more fortunate than even numbers), adding two additional months for the winter days – Ianuarius, with 29 days, and Februarius to cover the remaining 28 days. However, Februarius was split into two parts; its first 23 days completed the year, ending on the feast of **Terminalia**. The new year began on the 24th day of Februarius (so that Martius was still the first full month of the year).

The responsibility for determining whether a 13th month was needed was left to the city’s transporation chief, the Pontifex Maximus [L., chief bridgebuilder (the city straddles the river Tiber, and providing access points to cross was a vital function of local government)]. When it was deemed appropriate, Februarius was truncated at Terminalia (or sometimes the day after) and another month, named **Interkalaris**, of 27 days’ length, was inserted into the calendar. Initially, the decision to intercalate was taken from the rule of the Metonic cycle, but over the centuries, the calendar became politicized and endured regular abuses: the year was often lengthened by rulers who wanted to extend their own terms of office.
Dating of years generally used the Greek method of identification via the name of the man who served as Consul that year. But in later centuries, the practice developed of numbering years from the foundation of Rome by Romulus (after whom the city was named) in 753 BCE. The year number would then be preceded by the notation AUC [L., ab urbe condita = since the foundation of the city]. For instance, the Roman general Marcellus famously defeated the army of Hannibal of Carthage in AUC 546 = 216 BCE.

Like their ancestors the Etruscans, the Romans lived by an 8-day market week, called the *nundinae* [L. from nonanus + dies = ninth + day]. This terminology reflects the Roman practice of **inclusive counting**, whereby if any particular day was a market day, they would reckon that the next market day would be nine days hence by counting today as the first of those nine days. Inclusive counting pervades the Roman calendar, as we shall see.

Each day in the calendar was assigned one of the eight letters A through H, the first day of the year being labeled A. Then each year had a **nundinal letter** which highlighted for the user which days of that year would be the market days.
Calendar days might also receive additional letter notations. An **F**, for *fas* [L., allowed], marked days on which any type of work or business could be conducted, while **NF**, for *nefastus* [L., not allowed], marked a day on which such business was prohibited by religious law. Some days were marked **EN**, for *endotercius* [L., split into thirds]; on these days, the afternoon was considered *fas* while morning and evening were observed as *nefastus*. Days marked with **C** were scheduled for meetings of the public assembly, or *comitia*. And days marked **NP**, for *nefastus publicus*, were days of the great public festivals, on which none but the most necessary work was allowed.

Harking back to the days when the calendar was empirical and lunar, Romans called the first day of the month **Kalends** [Gr. kalein = to proclaim]. The word *calendar* derives from the Roman Kalends. The day marking the full Moon was the **Ides** [L., from iduare = to divide], the 14th day before the next new Moon; since months were sometimes 29 and sometimes 31 days long, that made the Ides either the 13th or the 15th of the month. Finally, the 8th day before the Ides (the 9th according to inclusive counting) was called the **Nones** [L. nonanus = ninth] of the month. All other days of the month were numbered relative to one of these three.
For instance, the month of October, with 31 days, was dated as follows:

1  Kal. Oct. (*Kalendae Octobris*)
    the Kalends of October
2  A.D. VI Non. Oct. (*ante diem VI Nonae Octobris*)
    the sixth day before the Nones of October
3  A.D. V Non. Oct. (*ante diem V Nonae Octobris*)
    the fifth day before the Nones of October
4  A.D. IV Non. Oct. (*ante diem IV Nonae Octobris*)
    the fourth day before the Nones of October
5  A.D. V Non. Oct. (*ante diem III Nonae Octobris*)
    the third day before the Nones of October
6  *Prid. Non. Oct.* (*Pridie Nonae Octobris*)
    the day before the Nones of October
7  Non. Oct. (*Nonae Octobris*)
    the Nones of October
8  A.D. VIII Id. Oct. (*ante diem VIII Idus Octobris*)
    the eighth day before the Ides of October
9  A.D. VII Id. Oct. (*ante diem VII Idus Octobris*)
    the seventh day before the Ides of October

...
In years when the intercalary month was inserted, the Ides of Februarius would be followed not by *A.D. XVI Kal. Mart.* as in common years, but *A.D. XI Kal. Int.* (or perhaps *A.D. XII Kal. Int.*). Then followed the Kalends, Nones and Ides of Interkalaris, with days appropriately numbered. The day after the Ides of Interkalaris was *A.D. XV Kal. Mart.*, the 13th day of this short month. Whether Februarius had 23 or 24 days in these years was decided at the discretion of the Pontifex. Some sources say that this flexibility allowed him to avoid scheduling the first day of the new year on a market day.

In the mid-5th c. BCE, the beginning of the year was moved from Martius 1 to Januarius 1 to coincide with the day that the Consul assumed power for his annual term. From this time the months of the year were now set in the order with which we are familiar today.
The Julian calendar

By the last days of the Roman Republic, the calendar had been so abused that when Julius Caesar declared himself Emperor in 46 BCE, it was a full three months out of step with the spring equinox. The Greek astronomer Sosigenes of Alexandria was consulted, and he proposed to the Emperor that the lunar calendar be abandoned in favor of a solar one. The intercalary month was to be forgotten entirely and the 12 remaining months would be lengthened to comprise a 365-day year. Then, to more accurately account for the fact that the tropical year was about 365.25 days, he suggested that a single day be intercalated instead every 4 years. It followed the Terminalia feast (as did the intercalated month), and this effectively repeated the following day. So A.D. VI Kal. Mart. was followed by bis A.D. VI Kal. Mart. [L. bis = again], known as the **bissextile** day.

All the months of the calendar then had either 30 or 31 days each, the same lengths as today, excepting February, which had 28 days normally or 29 in every fourth year.
This Julian calendar was adopted in 45 BCE, but the Pontifices who administered the calendar misunderstood the directive to add a day every fourth year, and added it instead (according to inclusive counting) every third year! The year was therefore still out of step with the equinoxes. Julius’ nephew and successor as Emperor, who took the name Augustus, recognized this error. In the year 9 BCE, he ordered that the intercalary day be left out for the next four cycles, until the year 8 CE, to right the problem. At the same time, Augustus renamed the month Quintilis after his uncle Julius. Soon thereafter, the month Sextilis was renamed after Augustus himself. Now the months had the names we recognize in today’s calendar.

The Roman Empire became Christian under Constantine in 313 CE. This began a period in which the calendar was also Christianized; the Church attempted to replace pagan feasts with Christian ones. In particular, there were many locations across Europe where the beginning of the year was moved to March 25, the feast of the Annunciation (the revelation to Mary by the Angel Gabriel that she would conceive the Son of God), called Lady Day in England. (That is, the year number would not advance until this date on the calendar.) In other places, the first day of the year was set for Easter Day, or even Christmas.
In 313 CE, the Emperor Constantine moved his capital city to Byzantium in the East – it then became known as Constantinople. He set September 1 to be the first day of the Indiction, a 15-year cycle for when property taxes were reassessed throughout the land. In 537 CE, the Emperor Justinian, ruled that thenceforth official documents were to be dated by their year within the Indiction cycle. By then the Eastern Church (later the Orthodox Church) was celebrating September 1 as the first day of their year.

In 532 CE, Dionysius Exiguus [Dennis the Short], an abbot living in Scythia (in modern Romania) determined that Jesus must have been born in the 28th year of the reign of Augustus, who was acclaimed as Caesar in 27 BCE. Dionysius used this knowledge to date the years in his Easter tables. Current tables prepared in Alexandria had been dating according to the Diocletian era, whose first year was the first of that Emperor’s reign, 284 CE, and Dionysius did not want to continue to memorialize an Emperor who was famous for his persecutions of Christians. His year numbers in the new scheme were prefaced by the letters AD, anno Domini [L., in the year of the Lord]. The system was not popular until the Venerable Bede used it in his Ecclesiastical History of the English People, written in 731 CE.
Unbeknownst to Dionysius, however, was the fact that Augustus dated his own reign not from his acclamation as Emperor, but from his military victory over Mark Antony at Actium four years earlier!