

# ESSAY: MEASURING TIME IN ANCIENT ROME

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The oldest Roman calendar dates back to the eight or seventh century BC. The year started in March, and consisted of ten months: six with 31 days and four with 30 days in between. The ten months were named as follows:

1. *Martius*: after the Roman god of war, *Mars* (March meant the start of the military season)
2. *Aprilis*: much doubt: maybe after *Aphrodite*? *Aperire*? *Apricus*?
3. *Maius*: possibly after *Maia*, mother of *Mercurius*
4. *Iunius*: after *Iuno*, wife of *Iupiter*
5. *Quintilis*: after *quintus* ('five' – the fifth month)
6. *Sextilis*: after *sextus* ('six' – the sixth month)
7. *September*: after *septem* ('seven' – the seventh month)
8. *October*: after *octo* ('eight' – the eighth month)
9. *November*: after *novem* ('nine' – the ninth month)
10. *December*: after *decem* ('ten' – the tenth month)

After these ten months there was a nameless period until Spring, when the new year began on the first of March. This nameless period was later divided in two extra months: *Ianuarius* and *Februarius*. *Ianuarius* refers to the Roman god *Ianus*, the god of doors, beginning and end. *Februarius* is named after *Februa*, a festival at the end of the winter with cleansing and thanking rituals.

The Roman republican calendar ( $\pm$  600 BC) counted 355 days and followed the cycle of the moon. To cover the difference between sun and moon, there was a special creation every two years: *intercalaris* or *mercedonius*. The last five days of *Februarius* were then transformed into a period of 27 or 28 days. In 153 BC they decided to let the year begin on the first day of *Ianuarius*, but the old names were kept to remember the old system (*September*, the 'seventh' month, now became the ninth month). The *intercalares* however were not always strictly followed, and this created after a while a huge difference between the actual seasons and the calendar: in 50 BC Spring began half May...

This problem was solved in 46 BC by *Caius Iulius Caesar*, as *pontifex maximus*. He brought the seasons back to normal by adding 67 extra days to that year. From that year on, the calendar followed the sun, every year being  $365 \frac{1}{4}$  long (so every four years one extra day was needed to come back to normal). The twelve months were kept, with their original names, but their length was adapted to fit the new system. In 44 BC, in remembrance of *Iulius Caesar*'s death, the name of the month *Quintilis* was changed into *Iulius*.

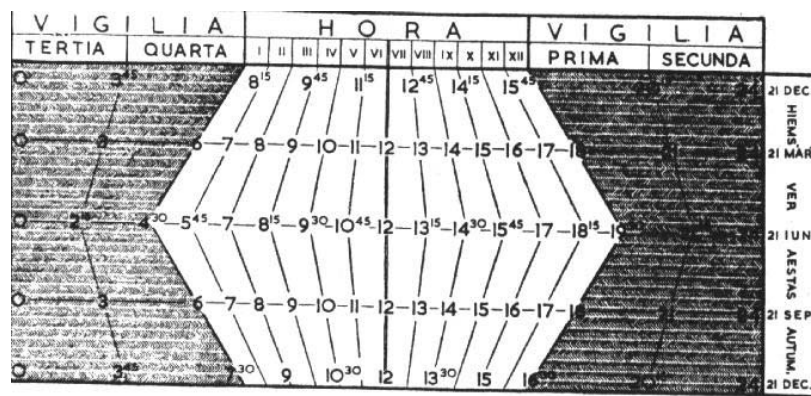
A last reform came in 8 BC: because of a mistake (they added an extra day every three years instead of every four years) the period between 8 BC and AD 4 knew no leap year. The month *Sextilis* was also renamed in this year: it became *Augustus* (and an extra day was added to this month, in order not to be shorter than *Caesar*'s month).

The Romans knew no such thing as a week; the seven days-week will only be introduced by Constantine the Great in the fourth century (see further). The days in a month were counted as follows:

1. Every month had three marks for counting the days
  - *Kalendae*: the first day of the month
  - *Nonae*: the fifth or seventh day of the month
  - *Ides*: the thirteenth or fifteenth day of the month
2. From these marks on, the counted back to name the days: *Pridie Nonae Februarii* was the day before the *nonae* of *Februarius* (February 6); III NON FEB is the abbreviation for the third day before the *nonae* of February (February 5)

3. Notes:
- *Nonae* always fall on the 9th day of the ides (*'nonae' < 'novem'*).
  - Since we have to count backwards to name the days, counting from the *kalendae* gives a date in the previous month, for example IV KAL IUN is May 29th.
  - The extra day at the end of February every four years is noted as BIS VI KAL MART; such a year is called '*annus bissextus*' or '*annus bissextilis*'.

A Roman's idea about the hour was also different from our view. For us an hour is 60 minutes, and a minute is 60 seconds. But the Romans had no such intelligent things as watches to keep the time. They mostly used the sun and moon to tell what time it was. Therefor the following system was used:



The day, from sunrise to sunset, was divided into twelve segments called *hora*. Their length of course varied as the length of day varied. Thus *hora prima* (the first hour) began at 7.30 in December, but on 4.30 in June. The night was also divided, but then into four segments called *vigilia* (), corresponding with the four night-watches. Only the seventh hour (*hora septima*) and the third watch (*vigilia tertia*) always began on the same moment, no matter what time of the year.

As has been said before, the week as we know it has a religious origin, and was introduced by Constantine the Great. The week began on *Feria Prima*, also called *Feria Dominica*, *Dominica* or *Dies Dominicus*. Then came *Dies Secunda*, *Tertia*, *Quarta*, *Quinta*, *Sexta* and the week ended on *Feria Septima* (also *Sabbatum* or *Dies Sabbatinus*). But there was also an older system used, of Babylonian-Egyptian origin. In this system every hour of the week was dominated by one of the seven known planets (Sun, Moon, Saturnus, Mars, Mercurius, Juppiter and Venus). They all followed onto each other continuously, resulting in the following days of the week: *Dies Saturni*, *Dies Solis*, *Dies Lunae*, *Dies Martis*, *Dies Mercurii*, *Dies Iovis* and *Dies Veneris*. The Romanic languages kept most of this system (except *Dies Solis*, which became the Day of the Lord). The Germanic languages replaced most of these names with Germanic gods: Tiw, Wodan/Odin, Donar/Thor and Freya. We can summarize this in the following table:

FRENCH	SPANISH	ENGLISH	GERMAN
Lundi	Lunes	Monday	Montag
Mardi	Martes	Tuesday	Dienstag
Mercredi	Miércoles	Wednesday	Mittwoch
Jeudi	Jueves	Thursday	Donnerstag
Vendredi	Viernes	Friday	Freitag
Samedi	Sábado	Saturday	Samstag
Dimanche	Domingo	Sunday	Sonntag