

Metonic Cycle

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Predicting the phases of the Moon has always been a tricky problem but fortunately, in 433 B.C. Meton discovered that after a 19-year *Metonic Cycle* the phases of the Moon start to reoccur, within about 2 hours, on the same days of the same months of the year. If the dates of the full Moon are recorded during one 19-year-cycle, we can work them out for all the years of the following cycles.

These dates were inscribed in gold lettering on public monuments and, for this reason, the number of a year in a Metonic cycle is called the *Golden Number*.

The first year of a cycle can be chosen arbitrarily but the cycles now in use can be traced back to 1 B.C. so, the golden number of a year is the **remainder** after the year has been divided by 19. If the remainder is 0, the golden number is taken as 19.

The table on the next page gives you the dates of the full Moon for 1995–2032 as well as for all 19 years of the Metonic cycle.

		#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995	2014	1	16	14	16	15	14	13	12	10	9	8	6	6
1996	2015	2	5	3	5	4	4	2	2,31	29	28	27	25	25
1997	2016	3	23	22	24	22	22	20	20	18	16	16	14	14
1998	2017	4	12	11	13	11	11	10	9	8	6	5	4	3
1999	2018	5	2,31	2	31	30	30	28	28	26	25	24	23	22
2000	2019	6	21	19	20	18	18	16	16	15	13	13	11	11
2001	2020	7	9	8	9	8	7	6	5	4	2	2	1,30	30
2002	2021	8	28	27	28	27	26	24	24	22	21	21	20	19
2003	2022	9	18	16	18	16	16	14	13	12	10	10	9	8
2004	2023	10	7	6	6	5	4	3	2,31	30	28	28	26	26
2005	2024	11	25	24	25	24	23	22	21	19	18	17	16	15
2006	2025	12	14	13	14	13	13	11	11	9	7	7	5	5
2007	2026	13	3	2	3	2	2	1,30	30	28	26	26	24	24
2008	2027	14	22	21	21	20	20	18	18	16	15	14	13	12
2009	2028	15	11	9	11	9	9	7	7	6	4	4	2	2,31
2010	2029	16	30	28	30	28	27	26	26	24	23	23	21	21
2011	2030	17	19	18	19	18	17	15	15	13	12	12	10	10
2012	2031	18	9	7	8	6	6	4	3	2,31	30	29	28	28
2013	2032	19	27	25	27	25	25	23	22	21	19	18	17	17
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