
COMPUTATION OF THE BIBLICAL CALENDAR

ASTRONOMY AND MATHEMATICS

2020 - 2030

A Unique and Simple Way to Compute
the Biblical Calendar on a Year to Year Basis

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Research – 2019
Edited - 2020

Repairing the Breach of Promise

“And they that shall be of thee shall build the old waste places: thou shalt raise up the foundations of many generations; and thou shalt be called, the **repairer of the breach**, the restorer of paths to dwell in.

If thou turn away thy foot from the sabbath, from doing thy pleasure on my holy day; and call the sabbath a delight, the holy of the LORD, honourable; and shalt honour him, not doing thine own ways, nor finding thine own pleasure, nor speaking thine own words:

Then shalt thou delight thyself in the LORD; and I will cause thee to ride upon the high places of the earth, and feed thee with the heritage of Jacob thy father: for the mouth of the LORD hath spoken it.” Isaiah 58:12-14

“And ye shall know my **breach of promise.**”
Numbers 14:34

Margin: Changing of my purpose

Breach of Promise – Change of His Purpose

“The Lord was as an enemy: he hath swallowed up Israel, he hath swallowed up all her palaces: he hath destroyed his strong holds, and hath increased in the daughter of Judah mourning and lamentation.
[587 BC and 70 AD]

And he hath violently taken away his tabernacle, as if it were of a garden: he hath destroyed his places of the assembly: the LORD hath caused the solemn feasts and sabbaths to be forgotten in Zion, and hath despised in the indignation of his anger the king and the priest.” Lamentations 2:5, 6

Properties of the Biblical Calendar

- Luni-Solar
- Barley Harvest
- New Moon Horned Crescent
- Common and Embolismic Intercalation
- Sunset to Sunset

STEP BY STEP

BIBLICAL CALENDAR COMPUTATION

Properties of the Biblical Calendar

- Luni-Solar
- Barley Harvest
- New Moon Horned Crescent
- Common and Embolismic Intercalation
- Sunset to Sunset

Step 1. What you need in order to get started

Step 2. What data to use to compute the Biblical Calendar

Step 3. How to use the data to compute the Biblical Calendar

Step 4. How to reckon a calendar out of the data computed

Step 5. How to re-use these steps year after year

Step 6. How to compute an Embolismic Year

Step 7. What if you make a mistake computing the Biblical Calendar

INTRODUCTION – GETTING STARTED

“Make me to understand the way of thy precepts: so shall I talk of thy wondrous works.
Teach me, O LORD, the way of thy statutes; and I shall keep it unto the end.” Psalm 119:27, 33

“Put off thy shoes from off thy feet, for the place whereon thou standest is holy ground.” Exodus 3:5

- Always prepare yourself with **prayer** and even **fasting** before you attempt to research the Biblical Calendar – you are learning how to compute the Biblical Calendar in order to **WORSHIP** the Creator of the Universe at His Appointed Times.
- Make sure you follow the **Steps** in the order they are presented.
- Please **read** or **listen** to the material suggested before moving forward.
- If you believe you are ready to pass to the First Step then let us get started and **may the Holy Spirit be with you!**

Standing on Trial for your Beliefs The Biblical Calendar

“And ye shall know the truth and the
truth shall make you free.”
John 8:32

144000teachers.org
February 2019

- <https://www.youtube.com/watch?v=-p9epJmwF-M>

Properties of the Biblical Calendar

- Luni-Solar
- Barley Harvest
- New Moon Horned Crescent
- Common and Embolismic Intercalation
- Sunset to Sunset

- <http://www.144000teachers.org/wp-content/uploads/2019/02/STAND11.pdf>

Step 1. What you need to get started

- The first step to get started is to watch the Video on: **Standing on Trial for your Beliefs – The Biblical Calendar**
- Please make sure to **watch or listen to all the links** added in the **Power Point** by going to the **PDF** as you can only open the links in the PDF format
- Simply **open 2 windows** on your screen and listen or read the additional material when suggested on certain pages
- Once you have listened and read the **video and PDF** you are now prepared to take Step 2.

STEP 2. WHICH DATA TO USE TO COMPUTE THE BIBLICAL CALENDAR

Universal Time

Note: If you experience problems opening links, please simply copy and paste them in Google Search Bar (or see Slide 19)

I. Fraction Illuminated of the Moon Common or Embolismic Years

- https://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=1&year=2020&task=00&tz=+00
- <https://aa.usno.navy.mil/data/docs/MoonFraction.php>
- <http://www.14400teachers.org/wp-content/uploads/2019/02/Fraction-of-the-Moon-Illuminated-2020-2030-1.pdf>

II. Observatories Websites

- <https://aa.usno.navy.mil/data/index.php>
- https://aa.usno.navy.mil/faq/docs/moon_phases.php
- http://astro.ukho.gov.uk/moonwatch/n_extnewmoon.html

III. Moon Phases

- <https://aa.usno.navy.mil/data/docs/MoonPhase.php>
- <http://astro.ukho.gov.uk/nao/online/index.html#calendar>
- <http://www.14400teachers.org/wp-content/uploads/2019/02/Phases-of-the-Moon-2020-1.pdf>

IV. Gregorian and Biblical Months

- <http://www.14400teachers.org/wp-content/uploads/2019/01/Biblical-Calendar-Months-2018-2019..pdf>
- <https://www.youtube.com/watch?v=-aMhI2q1pH8>

Step 3. How to use the data to compute the Biblical Calendar

First Part

Universal Time

Moon Fractions Illuminated - 2020

Moon Phases Observation - 2020

Moon Phases Calculation - 2020

- https://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=1&year=2020&task=00&tz=+00

- https://aa.usno.navy.mil/faq/docs/moon_phases.php
- <http://astro.ukho.gov.uk/moonwatch/nextnewmoon.html>

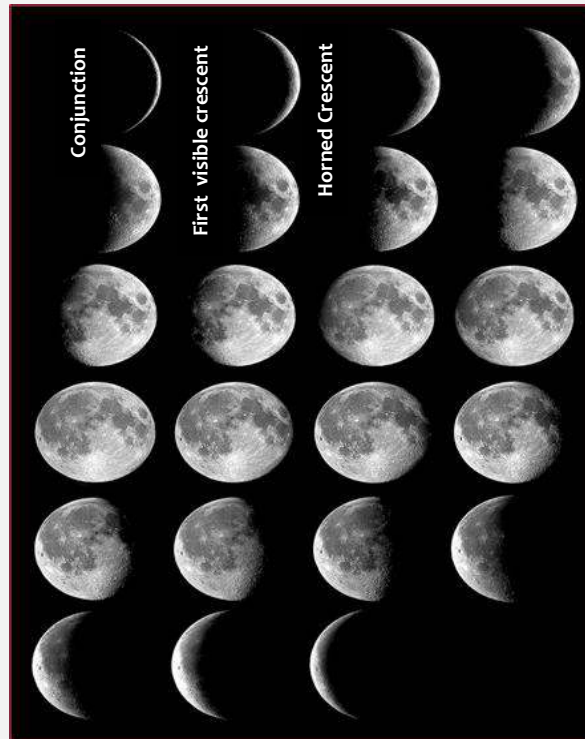
- <https://aa.usno.navy.mil/data/docs/MoonPhase.php>

Fraction of the Moon Illuminated, 2020 - COMMON
At Midnight
Universal Time

0.00 = Conjunction – 1.00 = Full Moon

Astron. Applications Dept.
U. S. Naval Observatory
Washington, DC 20392-5420

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88	0.84	0.72	0.69	0.57	0.44	0.40	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92	0.94	0.98	0.99
30	0.23	0.26	0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00
31	0.31	0.36	0.36	0.60	0.60	0.85	0.95	0.95	1.00	1.00	0.99	0.99



2020 Phases of the Moon
Universal Time - USNO

	New Moon	First Quarter	Full Moon	Last Quarter
	d h m	d h m	d h m	d h m
		Jan 3 4 45	Jan 10 19 21	Jan 17 12 58
Jan 24 21 42		Feb 2 1 42	Feb 9 7 33	Feb 15 22 17
Feb 23 15 32		Mar 2 19 57	Mar 9 17 48	Mar 16 9 34
Mar 24 9 28		Apr 1 10 21	Apr 8 2 35	Apr 14 22 56
Apr 23 2 26		Apr 30 20 38	May 7 10 45	May 14 14 03
May 22 17 39		May 30 3 30	Jun 5 19 12	Jun 13 6 24
Jun 21 6 41		Jun 28 8 16	Jul 5 4 44	Jul 12 23 29
Jul 20 17 33		Jul 27 12 32	Aug 3 15 59	Aug 11 16 45
Aug 19 2 42		Aug 25 17 58	Sep 2 5 22	Sep 10 9 26
Sep 17 11 00		Sep 24 1 55	Oct 1 21 05	Oct 10 0 39
Oct 16 19 31		Oct 23 13 23	Oct 31 14 49	Nov 8 13 46
Nov 15 5 07		Nov 22 4 45	Nov 30 9 30	Dec 8 0 36
Dec 14 16 16		Dec 21 23 41	Dec 30 3 28	

Step 3. How to use the data to compute the Biblical Calendar

Second Part

Universal Time

Moon Fractions Illuminated - 2020

Apparent Discrepancy

Moon Phases Calculation - 2020


- https://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=1&year=2020&task=00&tz=+00

Fraction of the Moon Illuminated, 2020 COMMON **Table 1.** Astron. Applications Dept. S. Naval Observatory Washington, DC 20392-5420

At Midnight Universal Time **0.00 = Conjunction – 1.00 = Full Moon**



Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88	0.84	0.72	0.69	0.57	0.44	0.40	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92	0.94	0.98	0.99
30	0.23	0.26	0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00
31	0.31	0.36	0.36	0.60	0.60	0.85	0.95	1.00	1.00	1.00	0.99	0.99

Apparent Discrepancy Explained

- The apparent discrepancy between the data of the fractions of the moon (Table 1.) and the 4 phases of the moon (Table 2.) disappears when the hours of the moon are ascertained:
 - If the conjunction for example occurs between 0.1-10 hours on (Table 2 – as hours in) the dates for the conjunction will be the same as the fraction illuminated on (Table 1.)
 - If however the phase occurs between 11-23 hours on (Table 2 in or), the conjunction will be a day later.
- 
- This is 98% accurate for any given moon phase, time, date, year. The 2% is the exception rather than the rule.

- <https://aa.usno.navy.mil/data/docs/MoonPhase.php>

Table 2. 2020 Phases of the Moon
Universal Time - USNO

	New Moon	First Quarter	Full Moon	Last Quarter
				
	d h m	d h m	d h m	d h m
Jan 24	21 42	Jan 3 4 45	Jan 10 19 21	Jan 17 12 58
Feb 23	15 32	Feb 2 1 42	Feb 9 7 33	Feb 15 22 17
Mar 24	9 28	Mar 2 19 57	Mar 9 17 48	Mar 16 9 34
Apr 23	2 26	Apr 1 10 21	Apr 8 2 35	Apr 14 22 56
May 22	17 39	Apr 30 20 38	May 7 10 45	May 14 14 03
Jun 21	6 41	Apr 30 20 38	May 7 19 12	Jun 13 6 24
Jul 20	17 33	May 30 3 30	Jun 5 4 44	Jul 12 23 29
Aug 19	2 42	Jun 28 8 16	Jul 5 15 59	Aug 11 16 45
Sep 17	11 00	Jun 28 8 16	Aug 3 5 22	Sep 10 9 26
Oct 16	19 31	Aug 25 17 58	Sep 2 21 05	Oct 10 0 39
Nov 15	5 07	Sep 24 1 55	Oct 31 14 49	Nov 8 13 46
Dec 14	16 16	Nov 22 4 45	Nov 30 9 30	Dec 8 0 36
		Dec 21 23 41	Dec 30 3 28	

Step 3. How to use the data to compute the Biblical Calendar

Third Part

Universal Time

Moon Fractions Illuminated – 2020 - 2030

Moon Phases Calculation – 2020 - 2030

- <http://www.144000teachers.org/wp-content/uploads/2019/02/Fraction-of-the-Moon-Illuminated-2020-2030.pdf>

- <http://www.144000teachers.org/wp-content/uploads/2019/02/Phases-of-the-Moon-2020-2030.docx-Conjunction-Full-Moon.pdf>



Fraction of the Moon Illuminated, 2020 COMMON At Midnight Universal Time

Table 1.
0.00 = Conjunction – 1.00 = Full Moon

Astron. Applications Dept.
U. S. Naval Observatory
Washington, DC 20392-5420

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88	0.84	0.72	0.69	0.57	0.44	0.40	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92	0.94	0.98	0.99
30	0.23	0.26	0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00
31	0.31	0.36	0.36	0.60	0.60	0.85	0.95	0.95	0.97	1.00	0.99	0.99

Table 2.
2020 Phases of the Moon
Universal Time - USNO

	New Moon	First Quarter	Full Moon	Last Quarter
				
	d h m	d h m	d h m	d h m
Jan 24	21 42	Jan 3 4 45	Jan 10 19 21	Jan 17 12 58
Feb 23	15 32	Feb 2 1 42	Feb 9 7 33	Feb 15 22 17
Mar 24	9 28	Mar 2 19 57	Mar 9 17 48	Mar 16 9 34
Apr 23	2 26	Apr 1 10 21	Apr 8 2 35	Apr 14 22 56
May 22	17 39	Apr 30 20 38	May 7 10 45	May 14 14 03
Jun 21	6 41	May 30 3 30	Jun 5 19 12	Jun 13 6 24
Jul 20	17 33	Jun 28 8 16	Jul 5 4 44	Jul 12 23 29
Aug 19	2 42	Jul 27 12 32	Aug 3 15 59	Aug 11 16 45
Sep 17	11 00	Aug 25 17 58	Sep 2 5 22	Sep 10 9 26
Oct 16	19 31	Sep 24 1 55	Oct 1 21 05	Oct 10 0 39
Nov 15	5 07	Oct 23 13 23	Oct 31 14 49	Nov 8 13 46
Dec 14	16 16	Nov 22 4 45	Nov 30 9 30	Dec 8 0 36
		Dec 21 23 41	Dec 30 3 28	

Step 3. How to use the data to compute the Biblical Calendar

Fourth Part

Universal Time

Moon Fractions Illuminated - 2020

Legend

Fraction of the Moon Illuminated, 2020 - COMMON
At Midnight
Universal Time

Astron. Applications Dept.
U. S. Naval Observatory
Washington, DC 20392-5420

0.00 = Conjunction - 1.00 = Full Moon

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81P	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96T	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99P	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95UB	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88FF	0.84	0.72	0.69	0.57	0.44	0.40T	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40UB	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10T	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92DA	0.94	0.98	0.99
30	0.23		0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00
31	0.31		0.36		0.60		0.85	0.95		1.00		0.99
	(30)	(29)	(30)	(30)	(29)	(30)	(29)	(30)	(29)	(30)	(29)	(29)

6 months (from April to September) = 3 months of 30 days + 3 months of 29 days = 177 days

Color Description

- New Moon - Conjunction 
- New Moon - Conjunction 
- New Moon Horned Crescent Sighting 
- New Moon Day Celebration 
- 7th day Sabbath and Feasts 
- 7th day Sabbath and Horned Crescent on same day 
- Holy Days - do secular work 
- Holy Days - Kept as a Sabbath - are not on a 7th day Sabbath 

Step 3. How to use the data to compute the Biblical Calendar

Fifth Part

Universal Time

Moon Fractions Illuminated - 2020

Common Year

Gregorian Calendar - 2020

Fraction of the Moon Illuminated, 2020 - COMMON
At Midnight
Universal Time

Astron. Applications Dept.
U. S. Naval Observatory
Washington, DC 20392-5420

0.00 = Conjunction - 1.00 = Full Moon

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81P	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96T	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99P	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95UB	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88FF	0.84	0.72	0.69	0.57	0.44	0.40T	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40UB	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10T	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92DA	0.94	0.98	0.99
30	0.23		0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00
31	0.31		0.36		0.60		0.85	0.95		1.00		0.99
(30)	(29)	(30)	(30)	(30)	(29)	(30)	(29)	(30)	(29)	(30)	(29)	(29)

6 months (from April to September) = 3 months of 30 days + 3 months of 29 days = 177 days

2020

January

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

March

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

July

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

October

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Step 4. How to reckon the Biblical calendar out of the data computed

Sixth Part

Calendar 2020

Universal Time

December 2019

Moon Fractions Illuminated - 2020

January 2020



December 2019

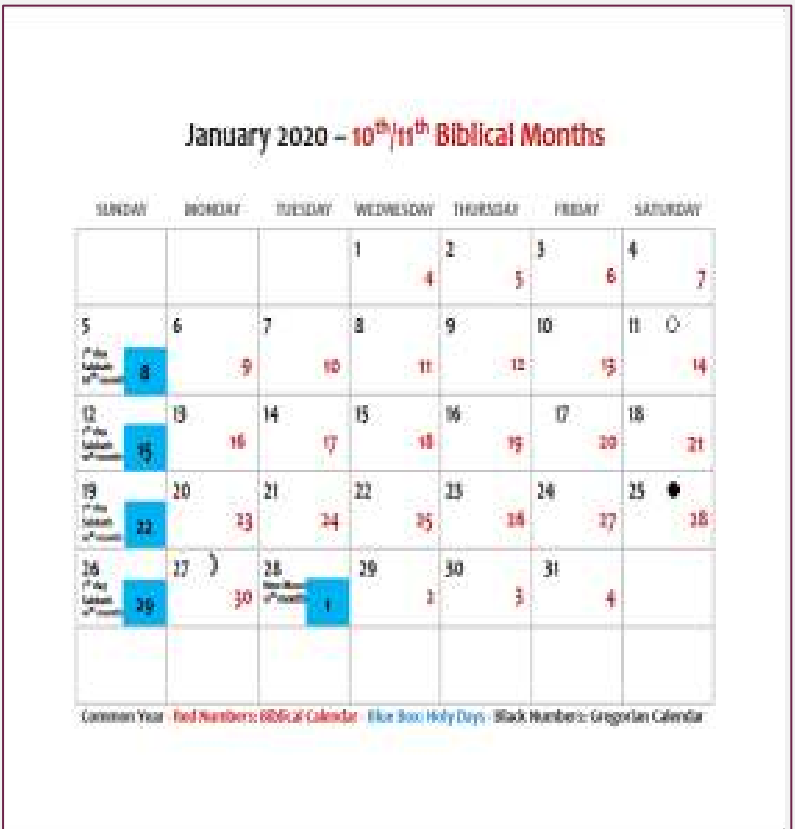
January 2020

Fractions of the Moon

Day	Fraction
01	0.20
02	0.29
03	0.38
04	0.47
05	0.57
06	0.66
07	0.75
08	0.82
09	0.89
10	0.95
11	0.98
12	1.00
13	0.99
14	0.96
15	0.91
16	0.84
17	0.74
18	0.64
19	0.52
20	0.41
21	0.30
22	0.20
23	0.12
24	0.06
25	0.02
26	0.00
27	0.01
28	0.03
29	0.08
30	0.14
31	0.22
(30)	

Fractions of the Moon

Day	Fraction
01	0.30
02	0.39
03	0.48
04	0.58
05	0.67
06	0.76
07	0.84
08	0.91
09	0.96
10	0.99
11	1.00
12	0.98
13	0.94
14	0.87
15	0.78
16	0.67
17	0.56
18	0.45
19	0.34
20	0.24
21	0.16
22	0.09
23	0.04
24	0.01
25	0.00
26	0.01
27	0.04
28	0.09
29	0.15
30	0.23
31	0.31
(30)	



Step 4. How to reckon the Biblical calendar out of the data computed

Seventh Part

Calendar 2020

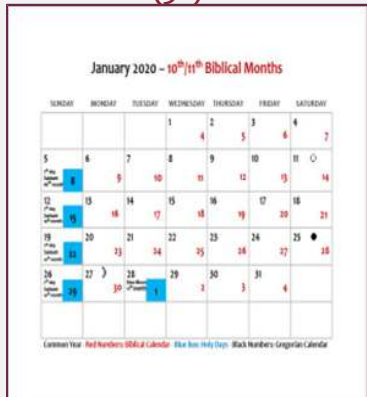
Universal Time

Biblical Calendar - 2020

Common Year

Moon Fractions Illuminated - 2020

(30)



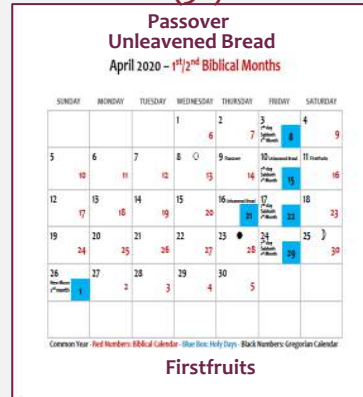
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(30)



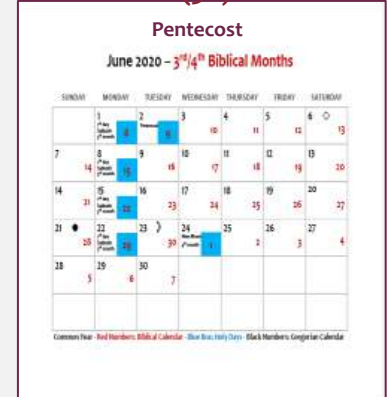
(30)



(29)



(30)



Rule: 177 days between Passover Month to Trumpets Month: 3 months of 30 days and 3 months of 29 days

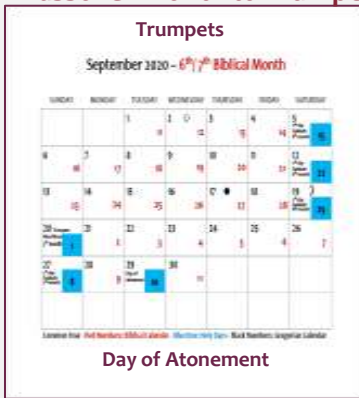
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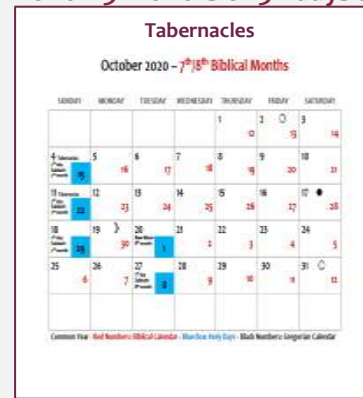
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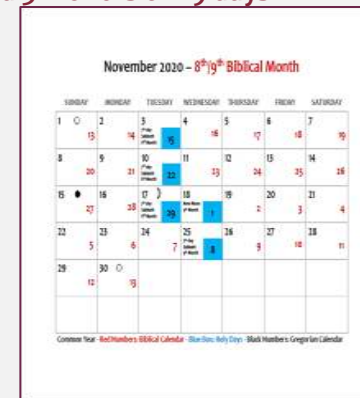
(29)



(30)



(29)



(29)



Step 4. How to reckon the Biblical calendar out of the data computed

Eight Part

Biblical Calendar

8 – 15 – 22 – 29

Biblical Months of 29 Days

New Moon – New Month

Biblical Months of 30 Days

Luni- Solar Monthly Calendar

1st	2nd	3rd	4th	5th	6th	7th
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
(30)						

The Luni-Solar Calendar is composed of 29 or 30 days.

The new moon starts the monthly cycle on the 1st day of each month.

The 7th day Sabbaths are the 8th, 15th, 22nd, and 29th of each month.

Biblical Months of 29 and 30 Days

January 2020 – 10th/11th Biblical Months

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
			4	5	6	7
5	6	7	8	9	10	11
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

New Moon – New Month

February 2020 – 11th/12th Biblical Months

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
						2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Sabbath Days: 8 – 15 – 22 – 29

Step 5. How to re-use these steps year after year

Universal Time

Moon Fractions Illuminated

Moon Phases Observation

Moon Phases Calculation

Gregorian Calendar

▪ https://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=1&year=2020&task=00&tz=+00

▪ https://aa.usno.navy.mil/faq/docs/moon_phases.php
 ▪ <http://astro.ukho.gov.uk/moonwatch/nextnewmoon.html>

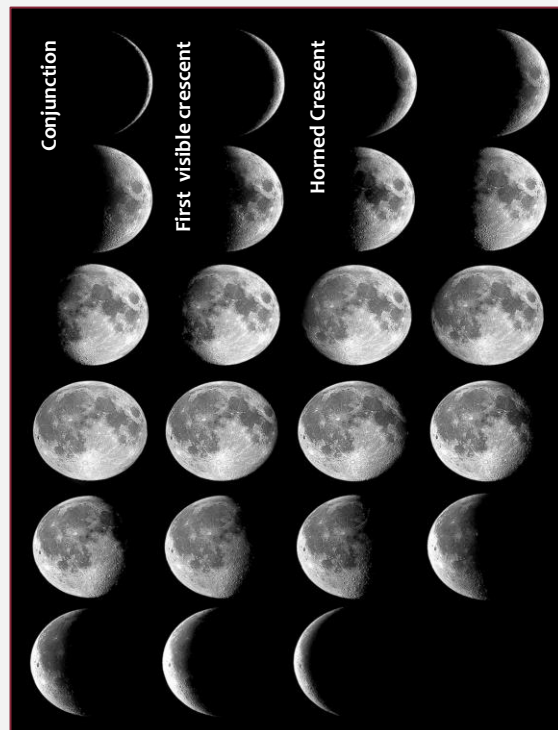
▪ <https://aa.usno.navy.mil/data/docs/MoonPhase.php>

Fraction of the Moon Illuminated, 2020 - COMMON
 At Midnight
 Universal Time

Astron. Applications Dept.
 U. S. Naval Observatory
 Washington, DC 20392-5420

0.00 = Conjunction - 1.00 = Full Moon

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81	0.88	0.97	1.00	1.00	0.98	0.98
03	0.49	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88	0.84	0.72	0.69	0.57	0.44	0.40	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92	0.94	0.98	0.99
30	0.23	0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00	1.00
31	0.31	0.36	0.60	0.60	0.85	0.95	0.95	1.00	1.00	1.00	1.00	1.00



Year Phases of the Moon
 Universal Time - USNO

	New Moon	First Quarter	Full Moon	Last Quarter
	d h m	d h m	d h m	d h m
Jan 24 21 42	Jan 3 4 45	Jan 10 19 21	Jan 17 12 58	
Feb 23 15 32	Mar 2 19 57	Mar 9 17 48	Mar 16 9 34	
Mar 24 9 28	Apr 1 10 21	Apr 8 2 35	Apr 14 22 56	
Apr 23 2 26	Apr 30 20 38	May 7 10 45	May 14 14 03	
May 22 17 39	May 30 3 30	Jun 5 19 12	Jun 13 6 24	
Jun 21 6 41	Jun 28 8 16	Jul 5 4 44	Jul 12 23 29	
Jul 20 17 33	Jul 27 12 32	Aug 3 15 59	Aug 11 16 45	
Aug 19 2 42	Aug 25 17 58	Sep 2 5 22	Sep 10 9 26	
Sep 17 11 00	Sep 24 1 55	Oct 1 21 05	Oct 10 0 39	
Oct 16 19 31	Oct 23 13 23	Oct 31 14 49	Nov 8 13 46	
Nov 15 5 07	Nov 22 4 45	Nov 30 9 30	Dec 8 0 36	
Dec 14 16 16	Dec 21 23 41	Dec 30 3 28		

Year

January	February	March
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4	1	1 2 3 4 5 6 7
5 6 7 8 9 10 11	2 3 4 5 6 7 8	8 9 10 11 12 13 14
12 13 14 15 16 17 18	9 10 11 12 13 14 15	15 16 17 18 19 20 21
19 20 21 22 23 24 25	16 17 18 19 20 21 22	22 23 24 25 26 27 28
26 27 28 29 30 31	23 24 25 26 27 28 29	29 30 31
April	May	June
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4	1 2	1 2 3 4 5 6
5 6 7 8 9 10 11	3 4 5 6 7 8 9	7 8 9 10 11 12 13
12 13 14 15 16 17 18	10 11 12 13 14 15 16	14 15 16 17 18 19 20
19 20 21 22 23 24 25	17 18 19 20 21 22 23	21 22 23 24 25 26 27
26 27 28 29 30	24 25 26 27 28 29 30	28 29 30
July	August	September
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4	1	1 2 3 4 5
5 6 7 8 9 10 11	2 3 4 5 6 7 8	6 7 8 9 10 11 12
12 13 14 15 16 17 18	9 10 11 12 13 14 15	13 14 15 16 17 18 19
19 20 21 22 23 24 25	16 17 18 19 20 21 22	20 21 22 23 24 25 26
26 27 28 29 30 31	23 24 25 26 27 28 29	27 28 29 30
October	November	December
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3	1 2 3 4 5 6 7	1 2 3 4 5
4 5 6 7 8 9 10	8 9 10 11 12 13 14	6 7 8 9 10 11 12
11 12 13 14 15 16 17	15 16 17 18 19 20 21	13 14 15 16 17 18 19
18 19 20 21 22 23 24	22 23 24 25 26 27 28	20 21 22 23 24 25 26
25 26 27 28 29 30 31	29 30	27 28 29 30 31

Step 5. How to re-use these steps year after year

Universal Time

Moon Fractions Illuminated

Moon Phases Observation

Moon Phases Calculation

Gregorian Calendar

Properties of the Biblical Calendar

- Luni-Solar
- Barley Harvest
- New Moon Horned Crescent
- Common and Embolismic Intercalation
- Sunset to Sunset

Step 1. What you need in order to get started

Step 2. What data to use to compute the Biblical Calendar

Step 3. How to use the data to compute the Biblical Calendar

Step 4. How to reckon a calendar out of the data computed

Step 6. How to compute an Embolismic Year

Universal Time

Moon Fractions Illuminated

Moon Phases Observation

Moon Phases Calculation

Gregorian Calendar

2020 – Common Year

Fraction of the Moon Illuminated, 2020 COMMON	Astron. Applications Dept. U. S. Naval Observatory Washington, DC 20392-5420											
At Midnight Universal Time	0.00 = Conjunction – 1.00 = Full Moon											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.30	0.40	0.33	0.46	0.52	0.71	0.79	0.92	0.98	0.99	1.00	1.00
02	0.39	0.49	0.42	0.56	0.63	0.81	0.88	0.97	1.00	1.00	0.98	0.98
03	0.48	0.59	0.52	0.67	0.73	0.89	0.94	0.99	0.99	0.99	0.95	0.94
04	0.58	0.69	0.62	0.77	0.83	0.95	0.98	1.00	0.97	0.96	0.90	0.88
05	0.67	0.78	0.72	0.86	0.91	0.99	1.00	0.98	0.93	0.91	0.83	0.80
06	0.76	0.86	0.81	0.93	0.97	1.00	0.99	0.94	0.87	0.86	0.75	0.71
07	0.84	0.93	0.89	0.98	1.00	0.98	0.96	0.89	0.80	0.78	0.66	0.61
08	0.91	0.98	0.95	1.00	0.99	0.94	0.91	0.82	0.72	0.70	0.56	0.50
09	0.96	1.00	0.99	0.99	0.97	0.88	0.85	0.75	0.63	0.60	0.46	0.39
10	0.99	0.99	1.00	0.95	0.91	0.80	0.77	0.66	0.54	0.50	0.35	0.28
11	1.00	0.96	0.97	0.88	0.84	0.72	0.69	0.57	0.44	0.40	0.24	0.18
12	0.98	0.90	0.92	0.80	0.75	0.62	0.59	0.47	0.34	0.30	0.15	0.10
13	0.94	0.81	0.85	0.70	0.66	0.53	0.50	0.38	0.25	0.20	0.07	0.04
14	0.87	0.71	0.75	0.60	0.56	0.43	0.40	0.28	0.16	0.12	0.02	0.01
15	0.78	0.60	0.65	0.50	0.46	0.34	0.31	0.20	0.09	0.05	0.00	0.00
16	0.67	0.49	0.54	0.40	0.37	0.25	0.23	0.12	0.03	0.01	0.01	0.02
17	0.56	0.39	0.44	0.30	0.28	0.17	0.15	0.06	0.01	0.00	0.05	0.07
18	0.45	0.29	0.34	0.22	0.20	0.11	0.08	0.02	0.01	0.02	0.11	0.14
19	0.34	0.20	0.25	0.15	0.13	0.05	0.04	0.00	0.04	0.07	0.19	0.22
20	0.24	0.12	0.17	0.09	0.07	0.02	0.01	0.01	0.10	0.15	0.28	0.31
21	0.16	0.07	0.10	0.04	0.03	0.00	0.00	0.05	0.18	0.24	0.38	0.41
22	0.09	0.03	0.05	0.01	0.01	0.01	0.02	0.12	0.28	0.34	0.48	0.50
23	0.04	0.01	0.02	0.00	0.00	0.03	0.07	0.20	0.38	0.44	0.58	0.60
24	0.01	0.00	0.00	0.01	0.02	0.08	0.14	0.31	0.49	0.55	0.67	0.69
25	0.00	0.02	0.01	0.03	0.05	0.16	0.22	0.42	0.60	0.65	0.76	0.77
26	0.01	0.05	0.02	0.08	0.11	0.25	0.33	0.53	0.70	0.74	0.84	0.85
27	0.04	0.10	0.06	0.14	0.18	0.35	0.44	0.64	0.79	0.82	0.90	0.91
28	0.09	0.16	0.11	0.22	0.27	0.46	0.56	0.74	0.86	0.89	0.95	0.96
29	0.15	0.24	0.18	0.31	0.37	0.58	0.67	0.83	0.92	0.94	0.98	0.99
30	0.23	0.26	0.41	0.48	0.69	0.77	0.90	0.97	0.98	1.00	1.00	1.00
31	0.31	0.36	0.60	0.60	0.85	0.95	0.95	1.00	1.00	1.00	0.99	0.99
Days	(30)	(29)	(30)	(30)	(29)	(30)	(29)	(30)	(29)	(30)	(29)	(29)

Common or Embolismic Year

Solar cycle of 365 days per year
Lunar cycle of 354 days per year

- ❑ Difference: 11 days between the 2 cycles. This difference is made up by the moon every 2 to 3 years by adding one month to the 12th month which is called an ‘Intercalation’.
- ❑ To compute a common or embolismic year using the Moon Fractions Illuminated, look at the position of the full moon for the month of April Gregorian reckoning (1.00). Passover Abib 14 is the day following the full moon.
- ❑ Barley ripens in Israel the second week of April – around the 8th of April. If the full moon is earlier - postpone the Passover to the next day after the next full moon as in the case of 2020 versus 2021.
 - <http://www.144000teachers.org/wp-content/uploads/2019/02/Fraction-of-the-Moon-Illuminated-2020-2030-1.pdf>

2021 - Embolismic Year

Fraction of the Moon Illuminated, 2021 - EMBOLISMIC	Astron. Applications Dept. U. S. Naval Observatory Washington, DC 20392-5420											
At Midnight Universal Time	0.00 = Conjunction – 1.00 = Full Moon											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
01	0.96	0.88	0.96	0.85	0.80	0.64	0.59	0.46	0.34	0.32	0.20	0.16
02	0.91	0.79	0.90	0.76	0.70	0.53	0.49	0.37	0.25	0.23	0.11	0.08
03	0.84	0.69	0.83	0.66	0.59	0.43	0.39	0.28	0.17	0.15	0.05	0.03
04	0.76	0.58	0.73	0.55	0.48	0.34	0.30	0.20	0.10	0.08	0.01	0.00
05	0.66	0.47	0.62	0.44	0.38	0.25	0.22	0.13	0.05	0.03	0.00	0.01
06	0.55	0.36	0.51	0.33	0.28	0.17	0.15	0.07	0.01	0.00	0.02	0.04
07	0.43	0.25	0.40	0.24	0.20	0.10	0.09	0.03	0.00	0.00	0.07	0.11
08	0.32	0.16	0.29	0.16	0.13	0.05	0.04	0.01	0.01	0.03	0.14	0.19
09	0.22	0.09	0.20	0.09	0.07	0.02	0.01	0.00	0.05	0.09	0.23	0.29
10	0.13	0.04	0.12	0.04	0.03	0.00	0.00	0.02	0.11	0.17	0.33	0.39
11	0.06	0.01	0.06	0.01	0.01	0.00	0.01	0.07	0.19	0.26	0.44	0.49
12	0.02	0.00	0.02	0.00	0.00	0.02	0.04	0.13	0.29	0.37	0.55	0.60
13	0.00	0.02	0.00	0.01	0.01	0.06	0.09	0.22	0.40	0.49	0.65	0.69
14	0.01	0.05	0.01	0.03	0.04	0.12	0.16	0.32	0.52	0.60	0.75	0.78
15	0.04	0.11	0.03	0.07	0.09	0.19	0.24	0.43	0.63	0.70	0.83	0.85
16	0.09	0.17	0.06	0.13	0.15	0.28	0.34	0.54	0.73	0.79	0.90	0.91
17	0.16	0.25	0.12	0.20	0.23	0.38	0.45	0.66	0.83	0.87	0.95	0.96
18	0.24	0.34	0.18	0.28	0.32	0.48	0.57	0.76	0.90	0.93	0.98	0.99
19	0.33	0.43	0.26	0.37	0.42	0.59	0.68	0.85	0.95	0.97	1.00	1.00
20	0.42	0.52	0.35	0.47	0.52	0.70	0.78	0.92	0.99	1.00	1.00	0.99
21	0.51	0.62	0.44	0.57	0.63	0.80	0.87	0.97	1.00	1.00	0.98	0.97
22	0.61	0.71	0.54	0.68	0.73	0.89	0.94	1.00	0.99	0.98	0.94	0.93
23	0.70	0.79	0.64	0.77	0.83	0.95	0.98	1.00	0.96	0.95	0.89	0.87
24	0.78	0.87	0.73	0.86	0.91	0.99	1.00	0.97	0.91	0.90	0.82	0.80
25	0.85	0.93	0.82	0.93	0.97	1.00	0.99	0.93	0.85	0.84	0.74	0.71
26	0.92	0.98	0.90	0.98	1.00	0.98	0.95	0.87	0.78	0.76	0.65	0.62
27	0.96	1.00	0.95	1.00	1.00	0.93	0.90	0.80	0.69	0.68	0.55	0.51
28	0.99	0.99	0.99	0.99	0.96	0.86	0.82	0.71	0.60	0.58	0.45	0.40
29	1.00	1.00	0.95	0.91	0.78	0.74	0.62	0.51	0.49	0.35	0.30	0.30
30	0.98	0.98	0.88	0.83	0.69	0.65	0.53	0.41	0.39	0.25	0.20	0.20
31	0.94	0.93	0.74	0.74	0.55	0.44	0.44	0.29	0.19	0.14	0.09	0.11

Step 7. What if you make a mistake computing the Biblical Calendar

Repairing the Breach after 2000 Years

- ❑ Following the events of 1798 which mark the end of the Dark Ages and of the first papal supremacy, a renewed study of the Biblical Calendar can be traced back to the Millerites Movement in the 1840 era mainly led by Baptist and Methodist ministers and lay people. They believed that Christ was returning to the earth according to the 2300 days of years prophecy of Daniel 8:14.
- ❑ Though the Millerites erred according to the event, their computation of the Biblical Calendar was based on the Karaites which rose against the Rabbinical Jews' alterations of the Biblical calendar around the destruction of Jerusalem in 70 AD and through the Dark Ages. We have actually been living close to 2000 years on false Biblical calendaric computation.
- ❑ After the Great Disappointment of 1844, the date of October 22, 1844 was retained by the Seventh-Day Adventist church as the Great Day of Atonement of Leviticus 23 as confirmed by their study on the Heavenly Sanctuary. But the pioneers started observing the 7th day Sabbath according to the Gregorian calendar reckoning in 1845 and Seventh-day Adventists have done so ever since.
- ❑ A renewed interest in the Biblical Calendar arose around 1939, 1995 and 2005 and it has opened an array of speculations as to what is the true Biblical Calendar – numerous sites on the Internet witness to this fact and few agree with each other.
- ❑ The Biblical Calendar is computed through Biblical, Astronomical, Archeological, Chronological, Historical and Spirit of Prophecy (BAACHS) data and requires much prayer, studies and perseverance. Because the Biblical Calendar is based on Observation and Calculation, it is possible by upholding the properties of the Biblical Calendar, to correct a mistake after computing it, especially if you ascertain the Biblical calendar for a whole year in advance and more, instead of relying on a month to month reckoning.

Computed Biblical Calendar Based on these:

Properties of the Biblical Calendar

- Luni-Solar
- Barley Harvest
- New Moon Horned Crescent
- Common and Embolismic Intercalation
- Sunset to Sunset

“In seeking to cast contempt upon the divine statutes, Satan has perverted the doctrines of the Bible, and errors have thus become incorporated into the faith of thousands who profess to believe the Scriptures. The last great conflict between truth and error is but the final struggle of the long-standing controversy concerning the law of God. Upon this battle we are now entering—a battle between the laws of men and the precepts of Jehovah, between the religion of the Bible and the religion of fable and tradition.” The Great Controversy, 582

**“And ye shall know the truth and
the truth shall make you free.”**

John 8:32

Table of References

Universal Time

Moon Fractions Illuminated

Moon Phases Observation

Moon Phases Calculation

Biblical Calendar

- <https://www.youtube.com/watch?v=-pgepJmwF-M>
- https://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=1&year=2020&task=00&tz=+00
- <https://aa.usno.navy.mil/data/docs/MoonFraction.php>
- <https://aa.usno.navy.mil/data/index.php>
- https://aa.usno.navy.mil/faq/docs/moon_phases.php
- <http://astro.ukho.gov.uk/moonwatch/nextnewmoon.html>
- <https://aa.usno.navy.mil/data/docs/MoonPhase.php>
- <http://www.144000teachers.org/wp-content/uploads/2019/02/Fraction-of-the-Moon-Illuminated-2020-2030.pdf>
- <http://www.144000teachers.org/wp-content/uploads/2019/02/Phases-of-the-Moon-2020-2030.docx-Conjunction-Full-Moon.pdf>
- <http://www.144000teachers.org/wp-content/uploads/2019/02/Biblical-Calendar-2019-2020.joined.pdf>