

Solar Calendar based upon Calendrical Documents 4Q320 and 4Q321

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

Appointed Times (mo'edim) from 4Q320 and 4Q321:

Sabbath (*Shabbat*) on the seventh day of every week; it is a holy convocation. [[Leviticus 23:3](#)].

14th of *Abib* = Passover (*Pesach*) [[Leviticus 23:5](#)].

15th through 21st of *Abib* = Unleavened Bread (*Chag HaMatzot*); the first and seventh days are holy convocations [[Leviticus 23:6-8](#)].

26th of *Abib* = Wave Offering (*Tenufah*) of the Barley Sheaf (*Korban Omer*)/Early Firstfruits (*Bikkurim*) [[Leviticus 23:10-14](#)].

14th of the Second Month = Second Passover (*Pesach Sheni*) [[Numbers 9:10-14](#)].

15th of the Third Month = Feast of Weeks (*Shavuot*)/Pentecost/Latter Firstfruits (*Yom HaBikkurim*); it is a holy convocation [[Leviticus 23:15-22](#)].

1st of the Seventh Month = Memorial or Day of Blasting (*Zichron/Yom Teruah*); it is a holy convocation [[Leviticus 23:24-25](#)]. **NOT Rosh HaShanah!**

10th of the Seventh Month = Day of Atonement (*Yom Kippur*); it is a holy convocation [[Leviticus 23:27-32](#)].

15th through 22nd of the Seventh Month = Feast of Tabernacles/Booths (*Sukkot*); the first and eighth days are holy convocations [[Leviticus 23:34-43](#)].

Other Feasts from 4Q325 and 4Q327:

1. Feast of New Wine (*Chag Tirosh*) on the third day of the fifth month.
2. Feast of New Oil (*Chag Yitzhar*) on the 22nd day of the sixth month.
3. Feast of the Wood Offering (*Korban Etzim*) on the 29th day of the sixth month.

Notes:

1. The first month is *Abib* as is prescribed in Torah [[Exodus 13:3-5](#)]; this is corroborated by 4QpaleoExod.
2. Each month consists of 30 days except for the months culminating with equinoxes and solstices (that is, the 3rd, 6th, 9th, and 12th months).
3. An intercalary day added to the end of the third month accounts for the summer solstice; denoted as **SS** on the calendar.
4. An intercalary day added to the end of the sixth month accounts for the autumnal equinox; denoted as **AE** on the calendar.
5. An intercalary day added to the end of the ninth month accounts for the winter solstice; denoted as **WS** on the calendar.
6. An intercalary day added to the end of the twelfth month accounts for the vernal equinox; denoted as **VE** on the calendar.
7. Each quarter consists of thirteen complete weeks (52 weeks in a year) for a total of 364 days.
8. All appointed times fall on the same day of the week every year; in fact, each quarter represents a repetitive pattern.
9. A day commences when the sun's orb sets atop of the western horizon; aka "twilight" (see illustration).



Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321
Division Year 1 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
1	1	Gamul	12	28	1	3		1: FM
	2	Delaiah	1	4	1	10		
	3	Maaziah	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	17: FoG
	4	Jehoiarib	1	18	1	24	21: Unleavened Bread (End)	
	5	Jedaiah	1	25	2	1	26: Waving of the (Barley) Sheaf	30: FM
	6	Harim	2	2	2	8		
	7	Seorim	2	9	2	15	14: Second Passover	
	8	Malchijah	2	16	2	22		17: FoG
	9	Mijamin	2	23	2	29		
	10	Hakkoz	2	30	3	6		30: FM
	11	Abijah	3	7	3	13		
	12	Jeshua	3	14	3	20	15: Feast of Weeks (Wheat)	16: FoG
	13	Shecaniah	3	21	3	27		
	14	Eliashib	3	28	4	3		29: FM
	15	Jakim	4	4	4	10		
	16	Huppah	4	11	4	17		15: FoG
	17	Jeshebeab	4	18	4	24		
	18	Bilgah	4	25	5	1		28: FM
	19	Immer	5	2	5	8	3: Feast of New Wine	
	20	Hezir	5	9	5	15		14: FoG
	21	Happizzez	5	16	5	22		
	22	Pethahiah	5	23	5	29		27: FM
	23	Jehezkel	5	30	6	6		
	24	Jachin	6	7	6	13		
	25	Gamul	6	14	6	20		14: FoG
	26	Delaiah	6	21	6	27	22: Feast of New Oil	27: FM
	27	Maaziah	6	28	7	3	29: Feast of the Wood Offering	
						1: Day of Memorial		
	28	Jehoiarib	7	4	7	10	10: Day of Atonement	
	29	Jedaiah	7	11	7	17	15: Feast of Tabernacles (Begin)	12: FoG
	30	Harim	7	18	7	24	22: Feast of Tabernacles (End)	
	31	Seorim	7	25	8	1		25: FM
	32	Malchijah	8	2	8	8		
	33	Mijamin	8	9	8	15		12: FoG
	34	Hakkoz	8	16	8	22		
	35	Abijah	8	23	8	29		25: FM
	36	Jeshua	8	30	9	6		
	37	Shecaniah	9	7	9	13		11: FoG
	38	Eliashib	9	14	9	20		
	39	Jakim	9	21	9	27		24: FM
	40	Huppah	9	28	10	3		
	41	Jeshebeab	10	4	10	10		10: FoG
	42	Bilgah	10	11	10	17		
	43	Immer	10	18	10	24		23: FM
	44	Hezir	10	25	11	1		
	45	Happizzez	11	2	11	8		
	46	Pethahiah	11	9	11	15		9: FoG
	47	Jehezkel	11	16	11	22		22: FM
	48	Jachin	11	23	11	29		
	49	Gamul	11	30	12	6		
	50	Delaiah	12	7	12	13		9: FoG
	51	Maaziah	12	14	12	20		
	52	Jehoiarib	12	21	12	27		22: FM

Notes:

- The primary text utilized in determining the calendar and courses was *The Complete Dead Sea Scrolls in English* by Geza Vermes (ISBN 0-14-027807-9).
- Each priestly division (*machlakah*) or course (*mishmar*) commences on the Sabbath so that there is no interruption of service; this is corroborated by 4Q322, 4Q323, and 4Q324.
- Missing information regarding Full Moons and the Fingernail of God (FoG) were extrapolated where applicable.
- 4Q325 and 4Q327 introduce three additional feasts: Feast of New Wine, Feast of New Oil, and the Feast of the Wood Offering. These were observed on the third day of the fifth month, the 22nd day of the sixth month, and the 29th day of the sixth month, respectively.
- The Levitical/Aaronic priesthood was instituted on the first Sabbath after Passover (i.e., 18 Abib). According to [1 Chronicles 24:7-18](#), Jehoiarib would have been the first course to commence the six-year priestly cycle; this coincides with the empirical evidence highlighted above. The 22nd course of Gamul is in progress on 1 Abib in the first year of this cycle because it is actually nearing the end of the six-year cycle (or can be back-calculated from the first course of Jehoiarib on 18 Abib).
- Based on [4Q317](#), it appears that Vermes correctly translated *duqah* as "full moon;" however, he mistranslated the FoG as "new moon." The FoG is the first sliver of a waxing crescent immediately AFTER a new (or "dark") moon.

Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321 Division Year 2 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
2	1	Jedaiah	12	28	1	3		
	2	Harim	1	4	1	10		7: FoG
	3	Seorim	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	
	4	Malchijah	1	18	1	24	21: Unleavened Bread (End)	20: FM
	5	Mijamin	1	25	2	1	26: Waving of the {Barley} Sheaf	
	6	Hakkoz	2	2	2	8		7: FoG
	7	Abijah	2	9	2	15	14: Second Passover	
	8	Jeshua	2	16	2	22		20: FM
	9	Shecaniah	2	23	2	29		
	10	Eliashib	2	30	3	6		6: FoG
	11	Jakim	3	7	3	13		
	12	Huppah	3	14	3	20	15: Feast of Weeks {Wheat}	19: FM
	13	Jeshebeab	3	21	3	27		
	14	Bilgah	3	28	4	3		
	15	Immer	4	4	4	10		5: FoG
	16	Hezir	4	11	4	17		
	17	Happizzez	4	18	4	24		18: FM
	18	Pethahiah	4	25	5	1		
	19	Jehezkel	5	2	5	8	3: Feast of New Wine	4: FoG
	20	Jachin	5	9	5	15		
	21	Gamul	5	16	5	22		17: FM
	22	Delaiah	5	23	5	29		
	23	Maaziah	5	30	6	6		4: FoG
	24	Jehoiarib	6	7	6	13		
	25	Jedaiah	6	14	6	20		17: FM
	26	Harim	6	21	6	27	22: Feast of New Oil	
	27	Seorim	6	28	7	3	29: Feast of the Wood Offering	2: FoG
							1: Day of Memorial	
	28	Malchijah	7	4	7	10	10: Day of Atonement	
	29	Mijamin	7	11	7	17	15: Feast of Tabernacles (Begin)	15: FM
	30	Hakkoz	7	18	7	24	22: Feast of Tabernacles (End)	
	31	Abijah	7	25	8	1		
	32	Jeshua	8	2	8	8		2: FoG
	33	Shecaniah	8	9	8	15		15: FM
	34	Eliashib	8	16	8	22		
	35	Jakim	8	23	8	29		
	36	Huppah	8	30	9	6		1: FoG
	37	Jeshebeab	9	7	9	13		
	38	Bilgah	9	14	9	20		14: FM
	39	Immer	9	21	9	27		
	40	Hezir	9	28	10	3		
	41	Happizzez	10	4	10	10		
	42	Pethahiah	10	11	10	17		13: FM
	43	Jehezkel	10	18	10	24		
	44	Jachin	10	25	11	1		29: FoG
	45	Gamul	11	2	11	8		
	46	Delaiah	11	9	11	15		12: FM
	47	Maaziah	11	16	11	22		
	48	Jehoiarib	11	23	11	29		29: FoG
	49	Jedaiah	11	30	12	6		
	50	Harim	12	7	12	13		12: FM
	51	Seorim	12	14	12	20		
	52	Malchijah	12	21	12	27		

Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321 Division Year 3 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
3	1	Mijamin	12	28	1	3		28: FoG
	2	Hakkoz	1	4	1	10		10: FM
	3	Abijah	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	
	4	Jeshua	1	18	1	24	21: Unleavened Bread (End)	
	5	Shecaniah	1	25	2	1	26: Waving of the {Barley} Sheaf	27: FoG
	6	Eliashib	2	2	2	8		
	7	Jakim	2	9	2	15	14: Second Passover	10: FM
	8	Huppah	2	16	2	22		
	9	Jeshebeab	2	23	2	29		26: FoG
	10	Bilgah	2	30	3	6		
	11	Immer	3	7	3	13		9: FM
	12	Hezir	3	14	3	20	15: Feast of Weeks {Wheat}	
	13	Happizzez	3	21	3	27		26: FoG
	14	Pethahiah	3	28	4	3		
	15	Jehezkel	4	4	4	10		8: FM
	16	Jachin	4	11	4	17		
	17	Gamul	4	18	4	24		24: FoG
	18	Delaiah	4	25	5	1		
	19	Maaziah	5	2	5	8	3: Feast of New Wine	7: FM
	20	Jehoiarib	5	9	5	15		
	21	Jedaiah	5	16	5	22		
	22	Harim	5	23	5	29		24: FoG
	23	Seorim	5	30	6	6		
	24	Malchijah	6	7	6	13		7: FM
	25	Mijamin	6	14	6	20		
	26	Hakkoz	6	21	6	27	22: Feast of New Oil	23: FoG
	27	Abijah	6	28	7	3	29: Feast of the Wood Offering	
							1: Day of Memorial	
	28	Jeshua	7	4	7	10	10: Day of Atonement	5: FM
	29	Shecaniah	7	11	7	17	15: Feast of Tabernacles (Begin)	
	30	Eliashib	7	18	7	24	22: Feast of Tabernacles (End)	22: FoG
	31	Jakim	7	25	8	1		
	32	Huppah	8	2	8	8		5: FM
	33	Jeshebeab	8	9	8	15		
	34	Bilgah	8	16	8	22		21: FoG
	35	Immer	8	23	8	29		
	36	Hezir	8	30	9	6		4: FM
	37	Happizzez	9	7	9	13		
	38	Pethahiah	9	14	9	20		
	39	Jehezkel	9	21	9	27		21: FoG
	40	Jachin	9	28	10	3		3: FM
	41	Gamul	10	4	10	10		
	42	Delaiah	10	11	10	17		
	43	Maaziah	10	18	10	24		19: FoG
	44	Jehoiarib	10	25	11	1		
	45	Jedaiah	11	2	11	8		2: FM
	46	Harim	11	9	11	15		
	47	Seorim	11	16	11	22		19: FoG
	48	Malchijah	11	23	11	29		
	49	Mijamin	11	30	12	6		2: FM
	50	Hakkoz	12	7	12	13		
	51	Abijah	12	14	12	20		18: FoG
	52	Jeshua	12	21	12	27		

Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321 Division Year 4 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
4	1	Shecaniah	12	28	1	3		1: FM
	2	Eliashib	1	4	1	10		
	3	Jakim	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	17: FoG
	4	Huppah	1	18	1	24	21: Unleavened Bread (End)	
	5	Jeshebeab	1	25	2	1	26: Waving of the {Barley} Sheaf	30: FM
	6	Bilgah	2	2	2	8		
	7	Immer	2	9	2	15	14: Second Passover	
	8	Hezir	2	16	2	22		17: FoG
	9	Happizzez	2	23	2	29		
	10	Pethahiah	2	30	3	6		30: FM
	11	Jehezkel	3	7	3	13		
	12	Jachin	3	14	3	20	15: Feast of Weeks {Wheat}	16: FoG
	13	Gamul	3	21	3	27		
	14	Delaiah	3	28	4	3		29: FM
	15	Maaziah	4	4	4	10		
	16	Jehoiarib	4	11	4	17		15: FoG
	17	Jedaiah	4	18	4	24		
	18	Harim	4	25	5	1		28: FM
	19	Seorim	5	2	5	8	3: Feast of New Wine	
	20	Malchijah	5	9	5	15		14: FoG
	21	Mijamin	5	16	5	22		
	22	Hakkoz	5	23	5	29		27: FM
	23	Abijah	5	30	6	6		
	24	Jeshua	6	7	6	13		
	25	Shecaniah	6	14	6	20		14: FoG
	26	Eliashib	6	21	6	27	22: Feast of New Oil	27: FM
	27	Jakim	6	28	7	3	29: Feast of the Wood Offering	
							1: Day of Memorial	
	28	Huppah	7	4	7	10	10: Day of Atonement	
	29	Jeshebeab	7	11	7	17	15: Feast of Tabernacles (Begin)	12: FoG
	30	Bilgah	7	18	7	24	22: Feast of Tabernacles (End)	
	31	Immer	7	25	8	1		25: FM
	32	Hezir	8	2	8	8		
	33	Happizzez	8	9	8	15		12: FoG
	34	Pethahiah	8	16	8	22		
	35	Jehezkel	8	23	8	29		25: FM
	36	Jachin	8	30	9	6		
	37	Gamul	9	7	9	13		11: FoG
	38	Delaiah	9	14	9	20		
	39	Maaziah	9	21	9	27		24: FM
	40	Jehoiarib	9	28	10	3		
	41	Jedaiah	10	4	10	10		10: FoG
	42	Harim	10	11	10	17		
	43	Seorim	10	18	10	24		23: FM
	44	Malchijah	10	25	11	1		
	45	Mijamin	11	2	11	8		
	46	Hakkoz	11	9	11	15		9: FoG
	47	Abijah	11	16	11	22		22: FM
	48	Jeshua	11	23	11	29		
	49	Shecaniah	11	30	12	6		
	50	Eliashib	12	7	12	13		9: FoG
	51	Jakim	12	14	12	20		
	52	Huppah	12	21	12	27		22: FM

Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321 Division Year 5 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
5	1	Jeshebeab	12	28	1	3		
	2	Bilgah	1	4	1	10		7: FoG
	3	Immer	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	
	4	Hezir	1	18	1	24	21: Unleavened Bread (End)	20: FM
	5	Happizzez	1	25	2	1	26: Waving of the {Barley} Sheaf	
	6	Pethahiah	2	2	2	8		7: FoG
	7	Jehezkel	2	9	2	15	14: Second Passover	
	8	Jachin	2	16	2	22		20: FM
	9	Gamul	2	23	2	29		
	10	Delaiah	2	30	3	6		6: FoG
	11	Maaziah	3	7	3	13		
	12	Jehoiarib	3	14	3	20	15: Feast of Weeks {Wheat}	19: FM
	13	Jedaiah	3	21	3	27		
	14	Harim	3	28	4	3		
	15	Seorim	4	4	4	10		5: FoG
	16	Malchijah	4	11	4	17		
	17	Mijamin	4	18	4	24		18: FM
	18	Hakkoz	4	25	5	1		
	19	Abijah	5	2	5	8	3: Feast of New Wine	4: FoG
	20	Jeshua	5	9	5	15		
	21	Shecaniah	5	16	5	22		17: FM
	22	Eliashib	5	23	5	29		
	23	Jakim	5	30	6	6		4: FoG
	24	Huppah	6	7	6	13		
	25	Jeshebeab	6	14	6	20		17: FM
	26	Bilgah	6	21	6	27	22: Feast of New Oil	
	27	Immer	6	28	7	3	29: Feast of the Wood Offering	2: FoG
	28	Hezir	7	4	7	10	1: Day of Memorial	
	29	Happizzez	7	11	7	17	10: Day of Atonement	
	30	Pethahiah	7	18	7	24	15: Feast of Tabernacles (Begin)	15: FM
	31	Jehezkel	7	25	8	1	22: Feast of Tabernacles (End)	
	32	Jachin	8	2	8	8		2: FoG
	33	Gamul	8	9	8	15		15: FM
	34	Delaiah	8	16	8	22		
	35	Maaziah	8	23	8	29		
	36	Jehoiarib	8	30	9	6		1: FoG
	37	Jedaiah	9	7	9	13		
	38	Harim	9	14	9	20		14: FM
	39	Seorim	9	21	9	27		
	40	Malchijah	9	28	10	3		
	41	Mijamin	10	4	10	10		
	42	Hakkoz	10	11	10	17		13: FM
	43	Abijah	10	18	10	24		
	44	Jeshua	10	25	11	1		29: FoG
	45	Shecaniah	11	2	11	8		
	46	Eliashib	11	9	11	15		12: FM
	47	Jakim	11	16	11	22		
	48	Huppah	11	23	11	29		29: FoG
	49	Jeshebeab	11	30	12	6		
	50	Bilgah	12	7	12	13		12: FM
	51	Immer	12	14	12	20		
	52	Hezir	12	21	12	27		

Cycle of Priestly Divisions from Calendrical Documents 4Q320 and 4Q321 Division Year 6 of 6

Year	Week	Division	Start		End		Appointed Times/Feasts	Lunar Phase
			Month	Day	Month	Day		
6	1	Happizzez	12	28	1	3		28: FoG
	2	Pethahiah	1	4	1	10		10: FM
	3	Jehezkel	1	11	1	17	14: Passover; 15: Unleavened Bread (Begin)	
	4	Jachin	1	18	1	24	21: Unleavened Bread (End)	
	5	Gamul	1	25	2	1	26: Waving of the {Barley} Sheaf	27: FoG
	6	Delaiah	2	2	2	8		
	7	Maaziah	2	9	2	15	14: Second Passover	10: FM
	8	Jehoiarib	2	16	2	22		
	9	Jedaiah	2	23	2	29		26: FoG
	10	Harim	2	30	3	6		
	11	Seorim	3	7	3	13		9: FM
	12	Malchijah	3	14	3	20	15: Feast of Weeks {Wheat}	
	13	Mijamin	3	21	3	27		26: FoG
	14	Hakkoz	3	28	4	3		
	15	Abijah	4	4	4	10		8: FM
	16	Jeshua	4	11	4	17		
	17	Shecaniah	4	18	4	24		24: FoG
	18	Eliashib	4	25	5	1		
	19	Jakim	5	2	5	8	3: Feast of New Wine	7: FM
	20	Huppah	5	9	5	15		
	21	Jeshebeab	5	16	5	22		
	22	Bilgah	5	23	5	29		24: FoG
	23	Immer	5	30	6	6		
	24	Hezir	6	7	6	13		7: FM
	25	Happizzez	6	14	6	20		
	26	Pethahiah	6	21	6	27	22: Feast of New Oil	23: FoG
	27	Jehezkel	6	28	7	3	29: Feast of the Wood Offering	
	28	Jachin	7	4	7	10	1: Day of Memorial	
	29	Gamul	7	11	7	17	10: Day of Atonement	5: FM
	30	Delaiah	7	18	7	24	15: Feast of Tabernacles (Begin)	
	31	Maaziah	7	25	8	1	22: Feast of Tabernacles (End)	22: FoG
	32	Jehoiarib	8	2	8	8		5: FM
	33	Jedaiah	8	9	8	15		
	34	Harim	8	16	8	22		21: FoG
	35	Seorim	8	23	8	29		
	36	Malchijah	8	30	9	6		4: FM
	37	Mijamin	9	7	9	13		
	38	Hakkoz	9	14	9	20		
	39	Abijah	9	21	9	27		21: FoG
	40	Jeshua	9	28	10	3		3: FM
	41	Shecaniah	10	4	10	10		
	42	Eliashib	10	11	10	17		
	43	Jakim	10	18	10	24		19: FoG
	44	Huppah	10	25	11	1		
	45	Jeshebeab	11	2	11	8		2: FM
	46	Bilgah	11	9	11	15		
	47	Immer	11	16	11	22		19: FoG
	48	Hezir	11	23	11	29		
	49	Happizzez	11	30	12	6		2: FM
	50	Pethahiah	12	7	12	13		
	51	Jehezkel	12	14	12	20		18: FoG
	52	Jachin	12	21	12	27		

Lunar Cycles from Calendrical Documents 4Q320 and 4Q321

Lunar Cycle 1 of 3

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

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

Lunar Month	# of Days
1st	29
2nd	30
3rd	29
4th	30
5th	29
6th	30
7th	29
8th	30
9th	29
10th	30
11th	29
12th	30
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Notes:

1. Full moon is denoted as FM, and the Fingernail of God (=first sliver of a waxing crescent immediately after a new "dark" moon) is designated as FoG. Vermes mistranslated "new moon;" instead, it is the FoG. This is confirmed in [4Q317](#).
2. **SS**, **AE**, **WS**, and **VE** denote summer solstice, autumnal equinox, winter solstice, and vernal equinox, respectively.
3. The three-year lunar cycle apparently commences with the full moon. For example, the first lunar month is comprised of solar days 1-29, totaling 29 days. Hebrew *chadash chodesh* and Greek *neomenia* refer to "new months" not "new moons."
4. The first year of the lunar cycle concludes on the 21st day of the twelfth month.
5. Apparently, this scenario assumes that the moon was created on the fourth day and that it was completely illuminated (i.e., a full moon). This concurs with the literal interpretation of the Genesis account.
6. The 354-day lunar year is exactly ten days less than the solar year of 364 days.

Lunar Cycles from Calendrical Documents 4Q320 and 4Q321

Lunar Cycle 2 of 3

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

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

Lunar Month	# of Days
1st	29
2nd	30
3rd	29
4th	30
5th	29
6th	30
7th	29
8th	30
9th	29
10th	30
11th	29
12th	30
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Note:

The second year of the lunar cycle commences with the 22nd day of the twelfth month from the previous solar year and concludes with the 11th day of the twelfth month.

Lunar Cycles from Calendrical Documents 4Q320 and 4Q321

Lunar Cycle 3 of 3

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

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

Lunar Month	# of Days
1st	29
2nd	30
3rd	29
4th	30
5th	29
6th	30
7th	29
8th	30
9th	29
10th	30
11th	29
12th	30
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Notes:

1. The third year of the lunar cycle commences with the 12th day of the twelfth month from the previous solar year and concludes with the 1st day of the twelfth month.
2. After the third solar year, the lunar cycles are exactly 30 solar days, or one solar month, deficient. A consequence of this occurrence is that the lunar cycles realign with the solar calendar -- with no intercalation required -- and creates an 'ot (sign) denoted in [4Q319](#) -- or a full moon on 1 Abib.