

The *Truth* About
GOD'S
CALENDAR

by David C. Pack

Herbert W. Armstrong led the Worldwide Church of God (formerly The Radio Church of God until 1968) until his death in 1986. Hundreds of millions heard his voice and read his literature. God called him in the fall of 1926 and he was converted in the spring of 1927. Over the course of Mr. Armstrong's ministry, God revealed through him a great many true biblical doctrines, which had been lost to the Church through the centuries. After his death, his successors ceased to believe and teach these doctrines. Although copyright law prohibits The Restored Church of God from reproducing and distributing literature produced while he led the Worldwide Church of God, we are committed to the preservation and teaching of all of these truths!

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What is the “sacred calendar”? Where did it come from? How does it work? Of what importance is it to the Church today? Why is it important to you? Here are the basics, and more...

Here is the truth about God's sacred calendar. A major identifying sign of the true Church of God is its observance of His annual Holy Days. This would be impossible without understanding the calendar, which reveals how to compute these days.

God charged the Levitical priesthood of ancient Israel, and later the Jews, to preserve His oracles—the Scriptures, the Sabbath and the calendar. Yet, never has the calendar come under such baseless attack (as is occurring with many time-honored institutions) as during the last decade or so—and this by so many self-professed “experts” ignorant of the mechanisms built into it.

Genesis 1 establishes that the sun and moon were appointed for *signs, seasons, days and years*. With this understanding, only the sacred calendar harmonizes the solar and lunar cycles. *The Truth About God's Calendar* explains why the 19-year time cycles are an astronomical fact. It also reveals the purpose of leap years and the real meaning of postponements, among other things.

Understand, however. This is a more technical booklet than all others offered by The Restored Church of God. Most readers will not find it either easy to understand or necessary to fully grasp all the details of God's calendar. While there is no evidence that the Church in previous ages felt it necessary to write a booklet on this subject, circumstances today have necessitated such a publication. This booklet is probably the first of its kind ever written by the Church of God—and the picture that it presents, for those interested in truly comprehending its content, will inspire awe for God's handiwork in structuring His calendar! But it is also intended to strengthen those who might be swayed by subtle deception. (It also offers an *Appendix*, containing

a series of calculations for the reader who wishes to explore certain aspects of these calendar calculations—with examples and tables—in greater detail.)

Since the Church Began

The sacred calendar—generally referred to as the Hebrew calendar or God's calendar—has been accepted without question by true Christians since the inception of the Church of God. This unconditional acceptance sprang from the confidence placed in the apostles who had been trained by Christ. Very few converts in the following generations were required to have firsthand knowledge of the workings of the calendar. We know this to be the case, since these following generations of the Church continued to look to the Jewish authorities for determining the new year and other calendar details. Knowledge of the details and mechanisms of the Hebrew calendar was never a prerequisite to understanding the truth of the Bible, and few ever needed to look into this matter. From every indication, as we learn from such well-researched works as *The Sabbatarians in Transylvania* by Samuel Kohn, the Church of God through the centuries continued to draw upon the knowledge shared by the Jews with all who had interest.

The true Church of God was never commissioned to oversee calendar calculations, which had been the responsibility of the Jews for many centuries. Likewise, the Church had never been commissioned to preserve the New Testament, this responsibility having been given to the Greeks. The Church of God has always been few in number and fiercely persecuted throughout most of its existence. Therefore, it was never in a position to manage the Hebrew calendar, anymore than it could preserve the Scriptures. The majority of those tested and tried through the centuries to the point of martyrdom were in no position to spend their time in detailed mathematical calculations or copying Greek manuscripts. Thus, God saw to it that such detailed matters were assigned to others.

The Calendar at Creation

It must be recognized that some background in early history is important here before continuing. This will help set the stage for all that is to follow.

Many have accused the Jews and others whom God entrusted to preserve the calendar of being guilty of “changing times and laws” (Dan. 7:25). However, the Jews did NOT invent the calendar—they did not contrive it from imagination. Its principles go back to the first chapter of the Bible, where the sun and the moon were appointed “...for signs, and for seasons, and for days, and years” (Gen. 1:14).

We have no concrete, documented evidence pertaining to the calendar in use at the time of creation. It has long been understood that at the time of Noah, months had been counted to be 30 days each, in that 150 days were attributed to 5 months (Gen. 7:11, 24; 8:4). These and other accounts in Genesis chapters

7 and 8 had led many to ponder whether a pre-Flood 360-day year—consisting of 12 months of 30 days each—had been established at creation. If so, such a balanced calendar might have continued up to the time of the Flood. If this were the case, as evidence seems to support, then the lunar and solar cycles would have been in perfect harmony, as were other facets of God's creation.

Proponents of the existence of such a harmonized pre-Flood calendar cite what has been called *the prophetic year*, based upon 360 days, as additional evidence of this original cosmic configuration—or the orbit of the Earth at Creation—(*The Chronology of Ezra 7*, Horn and Wood, p. 53). Although the biblical record appears to validate such a balanced year in various accounts in Genesis, it is evident that this did not continue indefinitely. Cosmologists cite events such as the Flood of Noah's time, among such causal factors, in effecting the intricate balance of the Earth's orbit, as well as the alignment of its axis. Cosmologists have also come to recognize that major catastrophes had left their mark in far more significant ways than merely the geological and fossil records (*Biblical Cosmology and Modern Science*, Morris, pp. 29-31).

Other events of potentially cosmic impact could have occurred at the time of the destruction of the Tower of Babel, the parting of the Red Sea, Joshua's long day, the movement of the sundial of Ahaz and its return (II Kgs. 20:11) during the time of Hezekiah—to mention a few. As a case in point, the destruction at the tower of Babel was much more than an isolated event, but was accompanied by a global phenomenon, in which changes in the stratosphere cut mankind's life-span more than in half—as had already occurred in the wake of the Flood. An average of the listed life-spans from the Flood to this event was 484 years, while afterward it was quickly reduced to 195 years, according to the biblical record.

The net effect of a number of upheavals in the cosmic alignment could have readily altered the Earth's orbit around the sun, the moon's orbit around the Earth, the tilt of the Earth, or other intricate variables in the immediate solar network. Such events were spread out over hundreds of years. We do know that a discrepancy between the lunar and solar cycles occurred in ancient times and the calendar had to be adjusted to reconcile these differences.

The Calendar as Presented to Moses

When God revealed the calendar to Moses, certain adjustments would most likely have been already accounted for by this time—about 880 years removed from the Flood. This calendar had to be accurate since certain Holy Days were to be observed on specific days in designated months—at a precise time of the year. In order to observe these days at the correct time, the solar and lunar cycles had to be reconciled. God, as Creator, guided this process as He inspired those whom He entrusted with this responsibility.

The great Eternal God is capable of expanding the abilities and skills of those whom He appoints for special assignments, just as He did with Bezaleel

of the tribe of Judah, involved in the construction of the tabernacle: “And I have filled him with the spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship to devise cunning works, to work in gold and silver and brass and in the cutting of stones...and in carving of timber...” (Ex. 31:3-5).

God was fully capable of instilling this unusual talent within Bezaleel and the skilled men that assisted him—men already gifted in certain ways. This same God was capable of inspiring various priests, gifted with mathematical minds, with the skills of being able to implement adjustments in the calendar to keep the solar and lunar cycles in harmony. Basic concepts of astronomy and the movements of the solar system were understood at that time—three millennia before the time of Copernicus.

The sacred calendar as presented to Moses was passed on to the priests and certain Levites. Acts 7:38 explains: “This is he, that was in the church in the wilderness with the angel which spoke to him in the Mount Sinai, and with our fathers: who received the lively oracles to give unto us.” Next, notice who was commissioned to preserve those “lively oracles”: “What advantage then has the Jew? Or what profit is there of circumcision? Much every way: chiefly, because that *unto them were committed the oracles of God*. For what if some did not believe? Shall their unbelief make the faith of God without effect? God forbid: yes, let God be true, but every man a liar...” (Rom. 3:1-4).

What are the oracles of God? They consist of the Scriptures, the Sabbath and God's sacred calendar. Some mistakenly reject the Hebrew calendar because they insist upon only looking to the Scriptures for guidance—not the Jews. Yet, it was God who entrusted the Jews to preserve the calendar *and* the Scriptures! (The Jews preserved the Law, Prophets and Psalms—known as the Old Testament—while the Greeks preserved the manuscripts from the apostolic era of the Church known as the New Testament.) Such doubters are essentially accusing God of being incapable of preserving the calendar intact.

What about you? Do you accept the Scriptures as authentic—as preserved by the Jews? If so, then would you not also accept that God is able to use the same human instruments to preserve the calendar?

The calendar that God presented to Moses became the responsibility of certain appointed Levitical priests and, centuries later, the Jews. We often refer to the calendar in honor of its source—*God's* sacred calendar. In reference to the hundreds of years of this calendar as used by ancient Israel, it is also called the *Hebrew* calendar. Many currently refer to the most recent versions as the *Jewish* calendar. We will reference the calendar by all these terms, depending upon the context of each reference. Throughout history, this calendar was essentially the same, yet, various adjustments became necessary. This was to implement across many centuries a harmonizing of variations between the solar and lunar cycles.

Introductory Overview of the Calendar

We begin the overview of the calendar by examining some of the basic facts about the Roman calendar in use today. The Julian calendar was set up in 45 BC, and recognized the solar year as being 365 1/4 days. However, this calendar was 12 minutes and 14 seconds off per year, which amounted to well over a 10-day error by the year 1582. Thus, ten days were dropped from the calendar so that it would correspond more closely to the solar year. The newly established Gregorian calendar not only served to diminish this existing error, but to help compensate for future errors by adding a leap year. Interestingly, it was not until 1752 that the English (and the American Colonies) adopted the Gregorian calendar. The leap year set by the Gregorian calendar adds one day every four years, except in even 100 years that cannot be divided by 400. Thus, for the years 1600, 1700, 1800, 1900 and 2000, only the years 1600 and 2000 could be leap years.

The Gregorian calendar compensates by 72 hours (3 days) every 400 years. The actual excess accumulated is 74 hours, 53 minutes and 20 seconds—an error of 2 hours, 53 minutes and 20 seconds every 400 years—one full day every 3,323 years. We will sometimes refer to the Roman calendar as the Julian or Julian/Gregorian, depending upon how the term is used by the references cited.

For a calendar to measure only the solar years makes it infinitely simpler than the Hebrew calendar, which harmonizes the lunar as well as the solar year. Note that the Julian/Gregorian calendar drifts off course by one full day in 3,323 years. It is completely ironic that the Hebrew calendar, which has a number of both coarse and fine adjustments in order to harmonize with both the solar and lunar cycles, is accused of lacking the precision achieved by the crude (by comparison) Gregorian calendar.

Consider that from the time the sacred calendar was presented to Moses to the present is a span of approximately 3,450 years. Some critics charge that the Hebrew calendar is not only *days* off track, but *months* off, or worse. Which is it? The critics do not know. They are only assured that the less *you* know, the better their chances of sowing doubt.

Precisely every 19 years (19-year cycles will be discussed later), the Hebrew calendar is given a reliability test. If it were *ever* out of sync with the 19 year time cycle, then many would stand ready to announce this imperfection. Yet, all we hear is silence. In recent centuries, the calendar has always accurately meshed with the 19-year cycles as it must have done anciently, due to adjustments that were implemented for this very purpose.

During the 3,450 years since Moses, adjustments have had to be added to the calendar to compensate for alterations in the orbital clock caused by such events as mentioned earlier. Yet, about 1,975 years ago, during the time of Christ's ministry on Earth, He kept the Holy Days at the same time as the Jews,

never pointing out any discrepancy in the Jewish calendar. Had the calendar been in error, He would have made it known. Yet, Christ was silent.

The point to be made here is this: If the Gregorian calendar can continue 3,323 years before missing a day, should not the Hebrew calendar (with its built-in methods to keep it from drifting off track) continue 1,975 years with the same level of accuracy?

It should be mentioned here that the Julian/Gregorian calendar mentioned earlier, or any other manmade calendar—and this should be obvious—was never a factor in the Hebrew calendar calculations in ancient times. Comparison with the Julian calendar in most modern works on that subject is merely for the purpose of referencing one calendar in terms of the other. This would be equivalent to translating back and forth between two languages today.

Recognize that all calendars either gain or lose time. Therefore, corrective measures must be taken, such as leap years and other adjustments, to periodically correct any discrepancies. Great care has to be taken to keep the Hebrew calendar in *perfect* harmony with the lunar cycle, since the Holy Days must occur at a precise time. The solar accuracy is of secondary importance, but is kept in harmony by periodic adjustments, as well.

By way of reference, much of the information pertaining to calculations in the text, as well as the Appendix, is in accordance with *The Comprehensive Hebrew Calendar* by Arthur Spier, 1952. Other references include *The Hebrew Calendar: A Mathematical Introduction*, prepared by Kossey and edited by Hoeh, 1974 and *The Encyclopaedia Britannica 11th edition*, vol. 4, under entry: "Hebrew Calendar."

Solar, Lunar and Luni-solar Calendars

Solar calendars go strictly by the time of the Earth's orbit around the sun. In a solar calendar, such as the Roman calendar (that most nations now observe), the time of the beginnings of the months, in relation to the moon, have no bearing whatsoever. It is strictly solar. The moon is given no consideration in the Roman calendar!

Next we consider the lunar calendar. The Islamic calendar is an example of a strictly lunar calendar. *All* the months begin with the new moon. They are alternately 29 or 30 days in length, with adjustments made every 33 years. Opposite to the Roman calendar, the *solar* aspects have no bearing on the purely lunar calendar. Since annual corrections are not implemented, the months will have the tendency to creep forward into different seasons of the year. In fact, the months creep through the full cycle about every 33 years. Imagine January where July used to be—this is the Islamic calendar.

Finally, the third type of calendar is the luni-solar calendar. This is the type that God presented to Israel, and it is based on both the solar *and* lunar frames of reference. The months and years are kept in balance. However, this task is somewhat complicated.

Let's examine this.

Reconciling the Solar and Lunar Timeframes

Before focusing upon calendar adjustments, we need to introduce a crucial element from astronomy—the 19-year time cycle. Precisely every 19 years, the sun, Earth and moon come back to the same location relative to each other. This was understood by ancient astronomers and still stands as one of the many axioms of astronomy in relation to our solar system. The fact that the Earth and the moon come back into the precise configuration with respect to the sun every 19 years serves as a continual evaluation as to the accuracy of the calendar. By implementing the adjustments built into the Hebrew calendar, it is completely unique, among calendars currently in use, in that it is kept “in sync” with this astronomical clock.

We now focus on the adjustments that keep the Hebrew calendar in harmony with the solar and lunar timeframes—with the 19-year time cycle serving as a *self-test* of this task.

To reconcile the difference in the solar and lunar “years,” 7 years are established as leap years in every 19-year cycle. To summarize, 7 leap years contain 13 months and the other 12 years (called common years) contain 12 months, amounting to a total of 235 months in a 19-year time cycle. To see the pattern of leap years in a 19-year cycle, notice the following layout. Leap years are bold and underlined to help clarify the pattern.

1 2 **3** 4 5 **6** 7 **8** 9 10 **11** 12 13 **14** 15 16 **17** 18 **19**

Now that the concept of 19-year time cycles has been introduced, we can clarify other terms. We will be addressing these time cycles again, shortly. (Most authoritative references on the calendar use the term “intercalary” for the term “leap.” We will use only the term “leap” in this booklet.)

The months in a year alternate between 29 and 30 days, beginning with 30. This process of alternating between 29 and 30 days gives an average of 29 1/2 days. Below is a simple layout of the months as they occur, along with the days as they would fall in normal (common) years, followed by a leap year to the right. The month of Tishri is listed first since the start (new moon) of this month is the benchmark for calculating the entire year. This will be explained more fully below:

Common Year			Leap Year	
Month	Days	Month #	Month	Days
Tishri	30	7	Tishri	30
Heshvan	29	8	Heshvan	29
Keslev	30	9	Keslev	30
Tebet	29	10	Tebet	29
Shebat	30	11	Shebat	30

Adar	29	12	Adar	30	(Becomes 30 days on leap years)
V'Adar	—	13	V'Adar	29	(Inserted 7 times every 19 years)
Nisan	30	1	Nisan	30	
Iyar	29	2	Iyar	29	
Sivan	30	3	Sivan	30	
Tammuz	29	4	Tammuz	29	
Ab	30	5	Ab	30	
Elul	29	6	Elul	29	

The month named V'Adar means Adar II. It comes at the end of the sacred year and is the extra 13th month only added to leap years.

A lunar month is 29 days, 12 hours and about 45 minutes—about 45 minutes longer than the 29 1/2 days designated for a month in the calendar. To make up for this discrepancy, adjustments were called for in the Hebrew calendar to bring the months back into balance. Two methods were used:

Heshvan (the 8th month) would be assigned 30 days in certain years, instead of the usual 29. *Keslev* (the 9th month) would be assigned 29 days in certain years, instead of the usual 30.

These two months are used to balance the actual lunar months, which differ by about 45 minutes from the average months as assigned to the calendar. So these two months bring the lunar times back into balance. These adjustments operate independently of each other. Time cannot be lost. It has to be accounted for, and this method has worked well for millennia.

Because of calendar adjustments, plus the combination of leap years and common years, we have the possibility of six different lengths of years. These six possibilities are:

Regular *Common* year = 354 days (12 months x 29 or 30 days)

Deficient *Common* year = 353 days (Keslev with 29 days)

Full *Common* year = 355 days (Heshvan with 30 days)

Regular *Leap* year = 384 days (13 months x 29 or 30 days)

Deficient *Leap* year = 383 days (Keslev with 29 days)

Full *Leap* year = 385 days (Heshvan with 30 days)

Some sources designate common years as *normal* years. They might designate the Full common year as the *Excessive* common year or the *Perfect* common year. Some authorities use the term “Defective” in place of “Deficient.” The precise names may vary, but the concepts are the same. That is why understanding the concepts is more important than memorizing terms. Don't get confused if the terms vary in cases where the same Hebrew word can be interpreted in multiple ways, such as common or normal or ordinary, etc. Be assured that the principles that underpin the concept of the Hebrew calendar are consistent, reliable and time-proven.

These six possibilities constitute the full range of year lengths. This may seem complicated, but these adjustments are required to keep the lunar cycles in harmony with the solar cycles and the solar cycles in harmony with the seasons. This lunar-solar balance is achieved *exclusively* by the Hebrew calendar. No other calendars in use today achieve this balance.

The Benchmark

All calculations within the sacred calendar have a certain “benchmark” from which crucial conclusions are derived. This introduces the concept of the Molad of Tishri. Molad refers to the new moon that signals the beginning of a new month. Tishri is the seventh month of the sacred year. The Molad of Tishri is of greatest importance, as far as the calendar is concerned. This is because Tishri begins with the new moon announcing the beginning of the Feast of Trumpets. The remaining three fall Holy Days also occur during this month.

The Molad of Tishri announces not only the beginning of the seventh month, but also the beginning of the civil year. This is somewhat comparable to the fiscal year that many businesses observe, usually from July through June of the following year. The beginning of the sacred year is in the spring of the year. It begins with the month of Nisan (Abib). Passover is observed on the 14th of this month, followed by the Days of Unleavened Bread. The fact that the civil year does not coincide with the sacred year is the reason that the above chart begins with Tishri (month #7), and the beginning of the sacred year (month #1), which is Nisan, is about midway down the chart.

As the beginning of the civil year, the Molad of Tishri is counted as the focal point of the calendar year. This particular new moon is the benchmark on which the calculations are hinged. The Molad of Tishri is sometimes simply referred to as the “Molad.” As a point of interest, if someone sought to find out the length of a particular year, the procedure would be to find the Molad of Tishri for the beginning of that year, as a starter. Next, the Molad of the following year would be calculated. Then the length of the year would simply be the number of days between the two Molads. It could only be one of the six possibilities, discussed earlier. Do not worry about remembering all of these details. However, you will soon see them come into play and fit into the pattern of establishing the exact days upon which the Molad of Tishri (beginning of the Feast of Trumpets) and the other Holy Days will fall.

The Seven-Day Weekly Cycle

One clear fact should emerge from the study of the 7-day weekly cycle. The calendar makes no alterations on the weekly cycle in any way. Some have implied that the calendar adjustments somehow shift the weekly Sabbath. This has never happened in the past and does not happen now.

Although the calendar never altered the weekly cycle in any way, adjustments in the calendar had to take place to accommodate certain days of the week. We will shortly see how one of the rules of postponements ties into the weekly cycle. It is ironic that one of the easiest concepts to clarify is the one to which most critics object—Rule 2 of postponements. Some claim that this adjustment was only introduced after the time of Christ. But this claim is completely incorrect. This “controversial” rule on postponements exists for this simple reason: The 7-day weekly cycle does not mesh with the 29 or 30 day month.

Because certain Holy Days were not intended to fall on particular week days, adjustments had to be made in the calendar, which would have *had to be in effect* from the time it was first presented to Israel. Neither the days of the week nor the Holy Days have changed since that time. The calendar had to make some considerable adjustments, because it is the Sabbath and the weekly cycle that are *absolutely unmovable*—NOT THE OTHER WAY AROUND!

Postponements are discussed at length in a following section of this booklet. At that point, we will consider all the rules pertaining to them.

Calendar Calculations Publicized

When Israel was under the God-ordained leadership of the priesthood, it was the priests' responsibility to follow the directions that God had provided to determine the times of the beginning of months and the Holy Days. They could make known the Holy Days in advance. After the Babylonian captivity, the Jews of the dispersion were able to look to the Jewish priesthood (who returned to Judea) as the central authority in the determination of the sacred years. The Sanhedrin assumed that responsibility from the time of Ezra until the time it was dissolved by the Romans in the fourth century AD. Shortly after the time of Christ, the Romans destroyed the temple, and many Jews were driven from Jerusalem soon after AD 135. In those most trying times, the calendar was still entrusted to the Jews, and the Jewish patriarchs continued to announce the arrival of the Holy Days. During the fourth century, the Roman authorities, in league with the Roman Catholic Church, outlawed Sabbath and Holy day observance.

Due to the increased level of persecution and the expelling of Jews from Jerusalem, it became necessary to release the rather complicated data used to calculate the calendar. Except for the next largest Jewish enclave in Babylon (of Mesopotamia), the dispersed enclaves could no longer look to the patriarchs to announce the time of the Molad of Tishri and when the other Holy Days would fall, as had been announced from Jerusalem. About the year AD 359, it became necessary for the patriarch Hillel II to publicize this information. Of course, it was delivered to Jewish enclaves in all known areas of the world. Besides the calendar instructions, Hillel II provided the Jews with charts that projected the Holy Days for hundreds of years in advance. For those who would wish to study the calendar calculations, predetermined answers to future calculations would measure their level of proficiency.

As mentioned earlier, the Church of God since the first century looked to local Jewish enclaves for the needed information pertaining to the timing of the new year and the respective Holy Days resulting from that benchmark. Overall, the Jews of the dispersion from the time of the fourth century continued to faithfully observe the calendar as given them by Hillel II.

There existed a few exceptions, such as the Essenes of the first century who deviated from the authentic calendar, with little or no impact upon those outside those sects. Another minority sect that existed shortly after the Babylonian captivity altered the calendar according to a 48-year cycle. Just as the Essenes who appeared centuries later, such groups made no impact on the established calendar accepted by the Jews on a worldwide scale.

What Are Postponements?

Postponements are the most misunderstood and most maligned of all the aspects of the calendar. Ironically, they are relatively easy to defend. Simply stating the facts defends both their purpose and intent.

There are *four* distinct postponements that exist with the Hebrew calendar. The purpose of postponements is to assure a permissible length of the year while reconciling the 7-day weekly cycle with the precise time of the month that certain Holy Days are to fall. This adjustment of the calendar to accommodate the weekly cycle is achieved by Rule 2—allowing certain week days and prohibiting others upon which Tishri 1, or the Molad of Tishri, can fall.

Here are the rules of postponement:

Rule 1: When the Molad of Tishri occurs at noon (12th hour in Roman time) or later, the Feast of Trumpets is postponed to the following day.

Rule 2: When the Molad of Tishri or a postponed Feast of Trumpets occurs on a Sunday, Wednesday, or Friday, the Feast of Trumpets is postponed to the following day. (Because of this, Atonement will never occur on either the day before or after a Sabbath.)

Rule 3: When the Molad of Tishri of a common year falls on Tuesday after 3:11 AM (3 Days, 3 Hours, 204 Parts), Trumpets is postponed to a Wednesday and, because of rule 2, further postponed to Thursday.

Rule 4: When, in a common year immediately following a leap year, the Molad of Tishri occurs on Monday about 9:33 AM (2 D, 9 H, 589 P) or later, the Feast of Trumpets is postponed to the next day.

Rules one and two are sometimes listed in reverse order in various publications. These two rules are not effected in the order given as long as the rules are allowed to interact.

The *first* rule simply states that if Tishri 1 occurred at or after *noon* on a particular day, then it would be postponed until the next day. This is entirely logical because the new moon observed in the afternoon would put the observance of

Tishri 1 within the last quadrant of that day, with the majority occurring in the following day. Therefore, the following day would be designated as Tishri 1.

The *second* rule is by far the most controversial. Many challenges to this rule have surfaced, primarily in the last decade or so. Of course, the timing of this criticism comes as no surprise. Some accuse the Jews of purposely inventing postponements to cause true Christians to stumble, by observing the Holy Days at the wrong time. This is utterly false—and ridiculous.

We need to establish the *reason* for the second postponement rule. If Tishri 1 falls on a Wednesday, then Atonement would fall on a Friday, the day of preparation for the weekly Sabbath. Those who correctly prepare for each weekly Sabbath are appreciative to God for this rule. It prevents many undue hardships. If Tishri 1 fell on a Friday, then Atonement would fall on a Sunday, the day after the weekly Sabbath. Either possibility, allowing Atonement to be consecutive with the weekly Sabbath, would be contradictory. So Atonement was always to be separated from falling immediately before or after the Sabbath. God would simply not put mankind into a contradictory situation of breaking or compromising the meaning of an *annual* Sabbath in order to observe a *weekly* Sabbath, or vice versa. This postponement exists for practical reasons to avoid a serious conflict in the order of Holy Days—not merely for the sake of convenience.

Close examination of God's laws reveals that the weekly Sabbath (Lev. 23:3) and the Day of Atonement (Lev. 16:29, 23:28) are the only two days that "no work" can be done. The other Holy Days specify "no *servile* work," but the Sabbath and Atonement specify "no work at all." Having these two consecutive Sabbaths would have been especially contradictory for the Levites. Their preparation for the Day of Atonement involved a significant amount of work and, to a lesser extent, so did their preparation for the weekly Sabbath. Another issue would be that of burial, in which two adjacent days that prohibited burial of the dead would have led to other serious contradictions.

If Tishri 1 fell on a Sunday, then the fall Holy Days of the Feast of Tabernacles (Tishri 15) and the Last Great Day (Tishri 22) would both fall on a Sunday, as well. Since these Holy Days represent the culmination of God's plan, He would not assign them to be represented by the *first* day of the week. After the day of Pentecost, the remaining Holy Days never fall on the first day of the week for this reason, as well as the fact that the weekly Sabbath would be in the preparation time for three of the four fall Holy Days. Such would be another contradictory situation, creating undue hardships. One last reason for this rule is that it would prevent the observance of the Passover on the evening beginning Nisan 14 from occurring on the evening immediately after the weekly Sabbath. This would be a clearly recognizable contradiction of schedule, since the Passover preparation would need to be made, but would be prohibited during the Sabbath.

Rules three and four adjust the setting of Tishri 1 when it falls within certain common years. These two rules have not presented a problem with anyone. Along with rule one, they are mainly for mathematical accuracy and assure

that all possible situations are accommodated by the six different year lengths. Rules three and four only affect a portion of the mornings of certain common years as defined by the rules. By contrast, rule one applies only to the afternoon portions of the calculated Molad of Tishri.

Rules one and two are by far the most frequently used, whether individually or together. It should also be noted that it is quite common for none of the four rules of postponement to apply in certain years, as well.

Postponements and the Day of Passover AD 31

If the Holy Days were completely out of alignment—being observed at the wrong time—*would Christ have taken note of it?* Of course! But no mention was made of this.

The four Gospels are replete with Christ's condemnation of the Jewish religious establishment. Had they been in error with the calendar, or the concept of postponements, be assured that Christ would have pointed this out. But if they were still in compliance with what He had established with Israel many centuries earlier, then one would EXPECT SILENCE on that subject—and this is exactly the case!

In the year AD 31, postponement rules one and two applied in combination, resulting in a two-day postponement of Tishri 1. Had the postponements not been in effect that year, then the Passover would have occurred on a Monday instead of a Wednesday. *The fact that Passover occurred on Wednesday, according to the rules of postponements, presents a powerful case that they were in use in the first century and that Christ accepted them.* (In the next section, we will see how Passover is counted from Tishri 1.)

Consider one other vitally important point, which further validates the use of postponements! Daniel prophesied, nearly 600 years before Christ's crucifixion, that the Messiah (Christ) would be "cut off...*in the midst of the week*" (9:26-27). Wednesday is literally the middle (midst) of the week. In other words, Daniel accurately foretold that Christ "our Passover" (I Cor. 5:7) would be crucified on a *Wednesday* Passover—to occur in AD 31. Daniel understood that Wednesday would be the correct date for Passover observance that year.

Of course, we have long understood that this verse also means that Christ's ministry was cut off, after 3 1/2 years, in the middle of a seven-year PROPHETIC week. *But, the seven-year prophetic week had to parallel a literal week.* Daniel's prophecy is commonly known as the "seventy weeks" prophecy. Many who once understood have forgotten this important knowledge. They have forgotten that the longest phase of this 490-year prophecy (486 1/2 years) spanned a period having to end in precisely AD 31 for the prophecy not to fail!

Consider. If postponement rules one and two had *not* been in effect, then Christ would *not* have correctly fulfilled Daniel's prophecy. Yet, as the God of the Old Testament, it was Christ who had inspired this very prophecy! In light

of these facts and His fulfillment, it can be better appreciated why Christ did not condemn the observance of postponements!

Assigning the Dates to the Remaining Six Holy Days

Once the Molad of Tishri—the Feast of Trumpets—has been established for any given year, we can assign dates for all the other Holy Days. The assignment of the three remaining fall Holy Days is forthright and simple. Since Atonement is on the 10th of Tishri, and the first day of the Feast of Tabernacles is on the 15th of Tishri, and the Last Great Day is on the 22nd of Tishri, no extensive calculation is needed for these assignments. Also, note that the 1st, 15th and 22nd of Tishri will always fall on the same day of the week.

Passover is determined by counting backward from the Feast of Trumpets that follows it. This is the logical method because every sacred year is centered on the Feast of Trumpets that occurs within that same sacred year. There is consistently a 164-day period between Passover (Nisan 14) and the Feast of Trumpets. None of the months between Nisan and Tishri are ever adjusted or varied. Therefore, the inclusive time is consistent. The first day of Unleavened Bread, on the 15th of Nisan, occurs one day after Passover. The last day of Unleavened Bread occurs on the 21st of Nisan. The assignment of these spring Holy Days are clear, much as the fall Holy Days that occur shortly after Trumpets.

The only remaining Holy day left to assign is Pentecost. This day is pinpointed by counting 50 days from the day after the weekly Sabbath that falls during the Days of Unleavened Bread. On this day, the wave sheaf offering was presented and the count began, inclusive of that specific day. Here the count *began* on the first day of the week and *ended* on the first day of the week. Some critics insist that the count proceeded from the day after the first Holy Day. If this were the case, a count would not be necessary. The time would be set as consistently 50 days beyond the first day of Unleavened Bread. But this is not the case and a count is necessary from the time of the wave sheaf offering on the day after the weekly Sabbath that falls during the time of Unleavened Bread as discussed above.

Notice that Pentecost always falls on a Sunday—the *beginning* of the week. This is to be expected because this Holy Day, among other things, marks the occasion of the *beginning* of the Church of God.

Clarifying Confusing Issues

Some may wonder how the Holy Days can be postponed two days and still be in sequence with the new moon and with the full moon occurring on the Feast of Tabernacles and the Feast of Unleavened Bread, which fall on the 15th of the sacred months. Since the calculated Tishri 1 occurs at the conjunction of the moon, the crescent of the new moon is not even visible until about a day later. The amount of days postponed can be 0, 1 or 2 days, averaging about 1 day, which is the usual time the moon appears after conjunction. It is seen that,

even with the two-day postponement, these Holy Days, which are *supposed* to occur on the full moon, *still* occur on the full moon. There is almost a three-day period of time in which the moon is full. This does not mean that any of the three days would suffice for observance of a feast. Only the days that are counted from Tishri 1, and adjusted by the legitimate postponements as set by God's calendar, represent the time set aside by God as His Holy Days.

You will note that in all four rules of postponement, the Molad of Tishri advances forward, but never backward. When compensation is called for in the postponement rules, the Molad of Tishri advances forward, compensating for this relative time drift. The time of advancement of the Molad of Tishri always closely approximates the cumulative drift within a few hours in any given year. Of course, by each 19-year time cycle the balance is precisely on schedule.

Instead of the postponements pushing the Holy Days off schedule, as some charge, they compensate for drift that would otherwise take them off schedule in the opposite direction. Amazingly, this is done while at the same time ensuring that the Holy Days fall at the permissible time without being in conflict with the weekly Sabbath.

Others often ask whether observation (of the new moon) or calculation of this time is the official method of setting the time recognized by the Hebrew calendar. At this present time, the Hebrew calendar is primarily based upon calculation, in which the Molad of Tishri is derived, based upon the accuracy of astronomical science that existed well before the time of Christ. Observation of the new moon is now considered a secondary means of confirming existing calculations. Observation could hardly be counted upon as the sole means of arriving at the precise time of the new moon, due to clouds which can obstruct the view.

Observation was considered the official means of establishing the Molad of Tishri during the time that the Sanhedrin was functioning—from the time of Ezra until the fourth century AD, according to *The Comprehensive Hebrew Calendar*. However, when visibility was impaired, calculation was called upon to interpolate, as well as for confirmation of what was observed. So, essentially, both calculation *and* observation have been employed—setting a useful system of checks and balances to insure ongoing accuracy.

Since the visible new moon of Judea had been the standard through the centuries, it is from *this vantage point* that official observations were made. Keep in mind that at different longitudes, the new moon will be viewed at significantly different times than as viewed from the area of Judea. Also, as one travels the different latitudes, from north to south, the exact viewing of the new moon will differ.

Observation of signs of the arrival of spring by the Sanhedrin also was used to establish that the 13th month of the leap year was correct with the season. After the Romans forced the Sanhedrin to dissolve, the calculated pattern of leap years proved to continue this accuracy with respect to the seasons. It is believed that adjustments such as the pattern of leap years were anticipated well in advance and

were implemented to compensate for adjustments needed for long-term accuracy. The most recent adjustment of this nature had occurred in about the year AD 142 at the time of the patriarch Simon III (*Jewish Encyclopedia*, 1907, vol. 3. p.500, as cited in *The Hebrew Calendar: A Mathematical Introduction*). At that time leap years that had previously fallen in the pattern of 2, 5, 7, 10, 13, 16, 18 of the 19-year cycle shifted forward by 1 year in the pattern of 3, 6, 8, 11, 14, 17, 19. This adjustment served to keep the calendar in harmony with the seasons for many centuries in advance—up to the present time.

Commonly Asked Questions About the Hebrew Calendar

We are now ready to cover a range of questions and issues pertaining to the Hebrew calendar. The order in which the questions are presented does not indicate an order of importance. These questions are of recent vintage and can easily be identified as such. Regardless of how absurd some of them may sound, they deserve answers, because issues of this nature have become stumbling blocks to many in this age.

(1) Why hasn't the Church written articles or booklets on the postpone-ments so that the membership could understand this sensitive calendar issue?

Ambassador College students in the Worldwide Church of God were required to learn basic aspects of the calendar and courses did exist for detailed calculations. Various articles have appeared that generally addressed the subject. An article entitled, *Prove God's Calendar Correct!*, by Kenneth Herrmann, appeared in a 1957 *Good News*. A few such articles were written, the last one appearing in 1981. However, there also existed a lengthy study course in the 1970s, titled, *The Hebrew Calendar: A Mathematical Introduction*, which taught detailed calculations of the calendar. Though not advertised, it was available mainly for students, yet could have been sent to anyone who requested the information. Such requests were virtually non-existent before the 1990s.

Since the calendar was not a big issue until recently, it was not often addressed. But there was never any contrived effort to hide such calendar issues from the membership.

Consider for a moment the endless confusion had God allowed—or somehow expected—every individual Israelite to calculate his own time of the Molad of Tishri through the centuries. In contrast to the anarchy that would result from endless independent mindsets, the government of God guarantees order, peace and harmony. That is why God only delegated such responsibility to those capable of consistently carrying out their *assigned* duties with precision. This rationale certainly applied to how the detailed calendar calculations and observations were to be carried out. In ancient Israel, the general population trusted the Levites, who were entrusted by God with decisions and judgments pertaining to the calendar. Recognizing they were

“What Happened in the Church”

During the fifth or Sardis Era of God's Church, as most of God's people drifted away from observance of the Holy Days, the sacred calendar came to be disregarded. During the twentieth century, those called into the truth learned of the Holy Days from the Scriptures and how they were related to the Hebrew calendar. The membership of the Church had confidence that the leadership understood these matters. It was extremely rare for anyone in the Worldwide Church of God to question the accuracy of the Hebrew calendar.

By the 1990s, most doctrines in God's Church were called into question, and ultimately cast aside by false leaders who took over the Church. As a result, the calendar naturally came into scrutiny by many independent thinkers—characteristic of this final era in Church history. Before this time, the calendar was rarely a controversial issue. The Hebrew calendar became controversial only in the eyes of those who sought to discredit it. Ironically, after an extensive course was published (1974) for educational use at Church headquarters (*The Hebrew Calendar: A Mathematical Introduction*, by Kossey), it was virtually never brought into question. Twenty years later, a new mindset prevailed, not necessarily armed with factual knowledge but determined to pick up where the apostates left off in their contempt for the truth.

Much of the confusion of this day originates from various critics who have capitalized upon certain calendar “issues”—with the intent of sowing doubt and uncertainty—to ultimately gain a following. While placing unique calendar revelations as the centerpiece of their new faith, they attempted to prove that the Jews were incapable and unworthy of preserving the calendar.

Some have gone so far as to accuse the Jews of *deliberately* altering the time of the Holy Days and the weekly Sabbath for their own convenience. This has served to mislead those not well rooted in the faith. Thus, a renewed appreciation for the intricacy and precision of the Hebrew calendar needs to be presented to those who still value sound doctrine.

answerable to God, these Levites faithfully and accurately executed their responsibilities.

(2) When did God first authorize the use of postponements?

Some feel that since postponements were not mentioned in the Scriptures, they must have been an invention by certain malicious Jews. The Scriptures were recorded for the benefit of Israel, God's Church and eventually all mankind. The calendar was probably recorded, but was properly and exclusively preserved by certain of the Levitical priesthood—*not within Scripture*. It has

always been separate from the Scriptures! God's word also does not define common or leap years, any more than they define 19-year time cycles or postponements. So, to assert that postponements are unscriptural and therefore illegal is begging the question, pure and simple!

Concerning the time when God first authorized the use of postponements, evidence indicates that *they were in place from the beginning*, when God presented the calendar to Moses for preservation by the Levitical priesthood. Consider rule two, which becomes necessary since the weekly cycle never meshes with the 29- or 30-day month. Since God made a provision that the weekly Sabbath was not to be adjacent to Atonement, such an adjustment became indispensable. This would have been just as applicable during the time of Moses as it was thousands of years later.

Remember that the first, third and fourth postponement rules help assure mathematical accuracy and help to accommodate for all possible situations. They also help ensure that only the six different year lengths will occur. Without these three mathematical postponements, the year lengths would not fall into the permissible range (from JCAL.txt file for: *The Jewish Calendar*; software for calculating calendar solutions). All available accounts indicate that the Hebrew years have *always* fallen within the permissible range. The postponements were obviously already in place.

Some falsely claim that the postponements were first implemented by Hillel II, in about AD 359. *There is no proof of this whatsoever*. It is well-documented that the calendar was made public at this time, for reasons mentioned earlier. Most authorities consider Hillel II a dedicated and orthodox Jewish patriarch, whose integrity in regard to the calendar was comparable to Ezra's devotion as "a ready scribe in the law of Moses."

We have already thoroughly covered the issue of the existence of postponements prior to the crucial event of Passover of AD 31. For this Passover to occur on a Wednesday instead of Monday in that year, postponement rules one and two would have had to have been in effect well before that time.

(3) Does the Hebrew calendar contradict or interfere with the timing of the Holy Days as given in Leviticus 23?

The Hebrew calendar merely shows when Tishri 1 will occur. After the conditions of the postponements are met, then Tishri 1—the Feast of Trumpets—is established, from which all of the other Holy Days are set. They are in complete harmony with Leviticus 23.

Closely examine the moon during the Feast of Trumpets. Weather permitting, you will observe the faint beginnings of the new moon in the evening sky. Realize that the exact observation of the new moon is determined from the area of Judea. But you should see a new moon a few hours after the fact, or perhaps a day removed, depending on your location. Then double-check the night sky on the opening night of the Feast of Tabernacles. You will find the big bright harvest moon glowing in full array. Likewise, you will see the

full moon on the Night to be Observed, as the Days of Unleavened Bread begin.

The calendar is necessary in order to keep God's Holy Days at the time He has established. Otherwise, there would be no benchmark with which to guarantee that we have our days precisely in order, as they were ordained. Thus, when God indicated that the month of Abib (Nisan) was to be the "beginning of months" for Israel (Exodus 12:2), there was no need to further define that month or the months that followed it. Such specific information was all defined by His calendar, which was later delivered to Israel shortly after the Exodus from Egypt.

(4) Can't we just look to the Scriptures instead of depending on the Jews to determine when the Holy Days should be kept?

This is also somewhat "begging the question." What such questioners are saying is that the Scriptures are worthy of trust but the Hebrew calendar is suspect. Without having to repeat every principle heretofore stated in this booklet, let's look at the issue from the perspective of what the Scriptures tell us—and what they do *not* tell us. The Scriptures do *not* tell us how to determine the beginning of the year, nor do they tell us where to find the benchmark to do so. They do *not* explicitly show us the average length of a lunar month as being approximately 29 1/2 days. They do *not* show which months should be 30 days and which should be 29 days. They do *not* show us when to determine the leap years that are needed to keep the lunar and solar cycles in harmony with each other. God gave all this information in His sacred calendar to the Levites. They were entrusted to follow these details to the utmost—and they did!

Instead of being suspicious, we should feel relieved that He never required every man, woman, and child to memorize every detail. Recognize that sometimes it is better to delegate certain tasks to the specialists, although one may seek a general understanding of the procedure used. God knew this, and thus appointed certain of the priesthood with this responsibility. As a result, there was order, consistency and uniformity in regard to the calendar.

Remember that God entrusted the Levites, and later the Jews, to preserve the Scriptures, *and* the calendar. Why would some feel that God was able to see to it that the Scriptures were well-preserved (including the time of the Sabbath), but that He failed miserably when it came to the calendar? Do not fall for such weak, unfounded arguments!

(5) Since when are the Jews infallible?

No human being is infallible. But, as stated above, God was able to use the Jews to preserve the Scriptures, just as He used them to preserve the calendar and the Sabbath. If you accept the Scriptures as authentic, then the calendar's authenticity should also be accepted. We might ask in turn: "Since when is God fallible or unable to preserve His calendar intact?"

(6) If the true Church received calendar information from the Jews, as you claim, then the Church must have adopted the observance of Passover and Pentecost in the same manner as the Jews. Is this not what happened?

To draw upon the expertise of the people that God used to preserve the calendar is one matter. To copy every single custom from these same people is an entirely different matter. Just as Paul in Romans 3:3 asked (with respect to the Jews preserving the Scriptures and the calendar) “What if some did not believe? Shall their unbelief make the faith of God without effect?” In this case, we could ask, does the failure of the Jews to observe the Passover or Pentecost at the correct time nullify their accuracy in preserving the calendar intact?

Once we understand exactly upon what day the Molad of Tishri is to fall, we can simply count backward by precisely 164 days to find when Nisan 14 occurs. Now if most Jews prefer to count back only 163 days to Nisan 15 and “combine” their Passover with the Night to Be Much Observed, that is their decision. Once the true Church obtained the understanding of the correct timing of the Molad of Tishri from the Jews, it became a simple matter to refer to Leviticus 23 and other relevant Scriptures which show the correct timing of God's Holy Days.

One relevant analogy of this situation could pertain to asking travel directions to reach a town in which the person offering these directions happens to reside. By the person helping you locate the town does not necessarily mean that he would be compelled to lead you exclusively to his specific address. Likewise, when we refer often to *The Comprehensive Hebrew Calendar* for guidelines in understanding how the calendar is calculated, this does not mean we are helpless to arrive at the correct date of the Passover on our own initiative. Although the author of this work followed the Jewish tradition of observing Passover on the 15th of Nisan, we are in no way blindly led to accept this observance, thinking he would not even know how to recognize the 15th from the 14th. (Even during the time of Christ, many of the Jews of Judea were wrongly observing Passover on the 15th of Nisan under the Hellenized Jewish leadership of that time. However, the Jews of Galilee and various others were faithful in maintaining Passover on the 14th of Nisan, just as the Church of God did, beginning shortly afterward.)

As far as the timing of Pentecost is concerned, different factions of the Jews have been divided over this issue for many centuries. For more detailed information about determining the time of Pentecost, read our article “How to Count Pentecost.” In short, the decision of WHEN TO OBSERVE either Passover or Pentecost ARE NOT CALENDAR ISSUES. The calendar answers the issues of correct timing for the Molad of Tishri. Once the calendar is established and correct, *then* one *is* to look to the Scriptures for instructions as to the exact dates with respect to the sacred calendar.

(7) What do 19-year time cycles have to do with the Hebrew calendar? We have been told that this was some strange belief that Mr. Armstrong held, which has since been disproved. Is this true?

One of the most basic principles of the calendar is the observation that the sun, Earth, and moon come back into the same relative position every 19 years—a fact of astronomy. In one lunar month, the moon rotates around the Earth. In one solar year, the Earth revolves around the sun. But only once in every 19 years do they come back into the same precise conjunction. Thus, every 19 years (the combination of 12 common years with 7 leap years [235 months exactly]), the lunar cycle comes back into *precise* conjunction with the solar cycle. The 19-year time cycle is the standard by which the lunar and solar cycles are brought into harmony. It is in between these precise points in time that the harmony between lunar and solar cycles is approximated by leap years, and other fine-tuning adjustments provided for by the calendar mechanisms. No manmade calendar maintains this balance. *It is as if God uses this precise alignment, every 19 years, to continually remind us that His calendar is still dependable and “on time.”* As you have seen, these time cycles are also a central part of calendar calculations.

Through observation of Church history, many events and time periods have, in fact, shown undeniable patterns corresponding with 19-year time cycles. Some of these patterns are included below. (Although this subject somewhat branches away from that of the calendar, it does help answer the above two-fold question.)

AD 31 (beginning of true Church) to AD 50 (Paul goes to Europe) is one 19-year time cycle. From this point, Paul's ministry continued until his martyrdom—just a few months short of the following 19-year time cycle.

AD 31 (beginning of true Church) to AD 69 (Jerusalem church flees to Pella) is 38 years, or two 19-year time cycles.

1934 (Philadelphia door opened) to 1953 (broadcast began in Europe) is one 19-year time cycle. The year of 1953 also marked 100 19-year time cycles (1900 years) from the time doors opened in numerous Greek cities and Paul's ministry flourished in Europe.

Other examples include time periods such as the powerful ministry of *Peter De Bruys*, which began in 1104 and lasted exactly one time cycle, until 1123. *Henry of Lausanne* then led the Church through the second, and part of the third, time cycle. The Work at that time languished for 12 years. But exactly on schedule, at the beginning of the next time cycle, in 1161, began the incredible ministry of *Peter Waldo*. Then, for one full time cycle, the Work was centered in Lyon, France. For the next time cycle, beginning in 1180, the Work was centered in Italy, as well as northern Europe. Between 1180 and 1199, the Work greatly expanded and bore incredible fruit. In 1199, with the beginning of the *Albigensian Crusade*, the Work—and God's people—were attacked with fire and the sword by decree of the Roman Catholics. By the end of this time cycle, in 1218, Peter Waldo was dead and this phase of the Waldensian Work had ended. In spite of intense persecution, much fruit was borne during the final 19 years of this Work.

“By a series of these 19-year time cycles, Jesus Christ put His signature as the *Creator* and *Sustainer* of the physical universe on His Church of the

Thyatira Era just as He had done on the Ephesus Era.” (Immediate quote and preceding paragraph were referenced from *Ambassador College Bible Correspondence Course*, Lesson 51, page 15, 1968.)

The claim that 19-year time cycles began as Mr. Armstrong's strange, personal idea was originally promoted by liberals in the Church in the 1970s. These same liberals opposed many of the other true doctrines restored by Mr. Armstrong, including prophetic understanding. This approach was shared by the apostate leaders after his death. So strong was the impact of these false leaders of the 1990s that it has continued among the scattered brethren *and their leaders* after the apostasy.

Belief in 19-year cycles is now regarded by many as fanaticism. Truly, “the way of the truth shall be evil spoken of” (2 Pet. 2:2), but this will not deter those who genuinely seek the truth. The concept of 19-year cycles is based on sound observation of patterns in Church and secular history.

Resolving the “Calendar Issue”

Certain calendars, offered by critics of the Hebrew calendar, make assumptions according to Jerusalem time—the new moon before the vernal equinox—the new moon after the vernal equinox—the new moon nearest it, whether before or afterward. Streamlining nothing, they add significant confusion to the issues. None of these “alternative” calendars improves on the traditional, time-tested-for-millennia Hebrew calendar. As in all other areas, man's alternatives fall far short of God's insight and foresight. In spite of men's new techniques to trace the conjunction of the new moon to a precise instant in time, their alternatives only serve to complicate (requiring further corrective parameters), rather than to streamline or simplify.

Mr. Herbert Armstrong faced the calendar issue early in his ministry, and like other leaders of the Church of God in previous eras, he recognized that the Hebrew calendar should be accepted. He spent much time carefully proving this point. This same man, whom God used to lead the Philadelphian Work, and to restore Holy Day observance, was led to investigate, study and accept this calendar. He recognized that the Hebrew calendar was the only basis for defining both the sacred year and the proper placement of the Holy Days, year after year!

False teachers will continue trying to undermine the faith of those who seek God through a variety of means. This booklet has been written to provide a better foundational understanding to resist these efforts (Eph. 4:13-15)! The “calendar issue” is always vulnerable for attack. This booklet answers most reasonable challenges. Because the struggle against false teaching is ongoing and dynamic in nature, issues will inevitably arise that have not been addressed here. But the foundation for this understanding is in place.

Will you ACCEPT—and HOLD FAST—the TRUTH of God's calendar?

For the benefit of calendar enthusiasts, the Appendix contains detailed instructions for calendar calculation. It shows how to determine the day of the

week and the day of the month upon which the Molad of Tishri will fall. You may wish to cover this fascinating—and inspiring—information now or reference it later, if it is of interest.

INSTRUCTIONS FOR CALENDAR CALCULATION

Terms You Need to Know

The Hebrew calendar uses a variety of basic terms. You are now familiar with most of them. To begin, the average length of a day is 24 hours. A day, as defined by God, begins at the time of sunset. For purposes of calculation, the *average* time of sunset is 6:00 PM. An hour is subdivided into 1,080 parts. One part equals about $3 \frac{1}{3}$ seconds, and is further divided into 76 moments. One moment is equal to a small fraction of a second. We will not need to worry with the details of calculating moments, but it is good to be aware that such a precise measurement of time exists.

All of the above facts, along with more details, will begin to make sense as we start fitting the pieces of the puzzle together.

Note that the lunar month is:

29 days 12 hours 44 minutes 2,841 seconds

Now this equates to:

29 days 12 hours 793 parts

In demonstrating the Hebrew calendar, it is necessary to explain some of the basic levels of calculation—we must “prove all things” (I Thes. 5:21). In order to prove something, you have to acquire a basic understanding of the subject. Certainly, an entire course in calendar calculation would go into what we are covering in far greater detail. So, we are mainly seeking an overview, but some examples of calculations will be necessary to appreciate the Hebrew calendar.

As noted above, a lunar month is equal to 29 days, 12 hours and 793 parts. In calendar calculations, using parts is far superior to the usage of minutes and seconds. From this time forward, we will use only parts. “Parts,” as units of time, were used by the Jews long ago in the counting of time, and we understand that this was an element of the calendar from the beginning. Remember that 1 hour = 1,080 parts.

A solar year is equal to 365 days, 5 hours and 997 parts. One solar year does not exactly equal 12 lunar months. We should now demonstrate the difference in these time frames.

$$\begin{array}{r}
 29 \text{ days} \quad 12 \text{ hours} \quad 793 \text{ parts (one lunar month)} \\
 \times 12 \text{ (multiply days, hours and parts independently by 12)} \\
 \hline
 348 \text{ days} \quad 144 \text{ hours} \quad 9,516 \text{ parts}
 \end{array}$$

To “reduce” the product of the equation to the lowest terms, we begin by dividing the parts by 1,080 to extract the hours from this term—the remainder stays in the parts column. So, 9,516 divided by 1,080 equals 8 full hours added to the hours column, and a remainder of 876 in the parts column. (You can practice these steps if you choose, but it is not necessary as long as you understand the procedure.)

Next, to reduce the hours to days, divide the 152 (144 + 8) hours by 24. This produces 6 extra days to add to the days column and leaves a remainder of 8 hours in the hours column. So the “reduced” answer is: 354 days, 8 hours, 876 parts. Remember that this was the total of 12 lunar months. We will subtract this expression from the solar year to establish the difference between one solar year and 12 lunar months.

$$\begin{array}{r}
 365 \text{ days} \quad 5 \text{ hours} \quad 997 \text{ parts (A solar year)} \\
 - (354 \text{ days} \quad 8 \text{ hours} \quad 876 \text{ parts}) \text{ (12 lunar months)} \\
 \hline
 10 \text{ days} \quad 21 \text{ hours} \quad 121 \text{ parts (the answer)}
 \end{array}$$

In subtracting 8 hours from 5 hours, it becomes necessary to borrow 1 day from the days column and then subtract the 8 hours from 29 (5+24) hours, which gives an answer of 21 hours. The net days become 10, since we borrowed from the 365 days, leaving only 364 from which to subtract.

From the above demonstration, we have established that a solar year is longer than 12 lunar months by 10 days, 21 hours and 121 parts. So herein resides the primary problem with most types of calendars—how to keep both the lunar and solar aspects of the calendar in balance. Again, only one calendar does this correctly—the Hebrew calendar.

The following 2 pages repeat information already covered in the text—but they are needed here for review:

Before proceeding, we have to re-introduce a crucial element from astronomy. This is the 19-year time cycle. Precisely every 19 years, the sun, Earth and moon come back to the same location relative to each other. This was understood by ancient astronomers and still stands as one of the many axioms of astronomy in relation to our solar system. To reconcile the difference in the solar and lunar “years,” 7 years are established as leap years in every 19-year cycle. To summarize, 7 leap years contain 13 months and the other 12 years (called common

years) contain 12 months, amounting to a total of 235 months in a 19-year time cycle. To see the pattern of leap years in a 19-year time cycle, notice the following layout. The leap years are bold and underlined to clarify the pattern.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Now that the concept of 19-year time cycles has been introduced, we must proceed to the clarification of other terms. We will be addressing these time cycles again, shortly. (Some of the calendar authorities use the term “intercalary” for the term “leap”. We will use only the term “leap” in this booklet.)

Remember, the months in a year alternate between 29 and 30 days, beginning with 30. This process of alternating between 29 and 30 days gives an average of 29 1/2 days. Below is a simple layout of the months as they occur, along with the days as they would fall in normal (common) years, followed by a leap year to the right. The month of Tishri is listed first since the start (new moon) of this month is the benchmark for calculating the entire year. This will be explained more fully below:

Common Year			Leap Year	
Month	Days	Month #	Month	Days
Tishri	30	7	Tishri	30
Heshvan	29	8	Heshvan	29
Keslev	30	9	Keslev	30
Tebet	29	10	Tebet	29
Shebat	30	11	Shebat	30
Adar	29	12	Adar	30 (Becomes 30 days on leap years)
V'Adar	—	13	V'Adar	29 (Inserted 7 times every 19 years)
Nisan	30	1	Nisan	30
Iyar	29	2	Iyar	29
Sivan	30	3	Sivan	30
Tammuz	29	4	Tammuz	29
Ab	30	5	Ab	30
Elul	29	6	Elul	29

The month named V'Adar means Adar II. It comes at the end of the sacred year and is the extra 13th month only added to leap years.

We previously defined a lunar month as 29 days, 12 hours and 793 parts. So it is obvious to see the actual lunar month is 793 parts (about 45 minutes) longer than the 29 1/2 days designated for a month in the calendar. To make up for this discrepancy, adjustments were called for in the Hebrew calendar to bring the months back into balance. Two methods were used:

Heshvan (the 8th month) would be assigned 30 days in certain years, instead of the usual 29. *Keslev* (the 9th month) would be assigned 29 days in certain years, instead of the usual 30.

These two months are used to balance the actual lunar months, which differ by about 45 minutes (793 parts) from the months designated by the calendar. So these two months bring the lunar times back into balance. These adjustments operate independently of each other. Time cannot be lost. It has to be accounted for, and this method has worked well for millennia, long before the modern critics of the Hebrew calendar came on the scene.

Because of calendar adjustments, plus the combination of leap years and common years, we have the possibility of six different lengths of years. These six possibilities are:

Regular Common year = 354 days (12 months x 29 or 30 days)

Deficient Common year = 353 days (Keslev with 29 days)

Full Common year = 355 days (Heshvan with 30 days)

Regular Leap year = 384 days (13 months x 29 or 30 days)

Deficient Leap year = 383 days (Keslev with 29 days)

Full Leap year = 385 days (Heshvan with 30 days)

Let's also do some important review of the Molad of Tishri. Again, Molad refers to the new moon that signals the beginning of a new month. Tishri is the seventh month of the sacred year. The Molad of Tishri is the most important, as far as the calendar is concerned. Tishri begins with the new moon that announces the beginning of the Feast of Trumpets. The remaining three fall Holy Days occur during this month as well. The Molad of Tishri announces not only the beginning of the seventh month, but also the beginning of the civil year. Again, this is generally comparable to the fiscal year some businesses observe, usually from July through June of the following year. The beginning of the sacred year is in the spring of the year. It begins with the month of Nisan (Abib). Passover is observed on the 14th of this month, followed by the Days of Unleavened Bread. The fact that the civil year does not coincide with the sacred year is the reason that the middle column in the above chart begins with Tishri (month #7), and the beginning of the sacred year (month #1), which is Nisan, is about mid-way down the chart.

Still reviewing, as the beginning of the civil year, the Molad of Tishri is counted as the focal point of the calendar year. This particular new moon is the benchmark on which the calculations are hinged. The Molad of Tishri is sometimes simply referred to as the "Molad." As a point of interest, if someone sought to find out the length of a particular year, the procedure would be to find the Molad of Tishri for the beginning of that year, as a starter. Next, the Molad of the following year would be calculated. Then the length of the year would simply be the number of days between the two Molads. It could only be one of the six possibilities discussed earlier. Do not worry about memorizing all of these details. However, you will soon see them come into play and fit into the pattern of establishing the exact days upon which the Molad of Tishri (beginning of the Feast of Trumpets) and the other Holy Days will fall.

To summarize this section, here is a simple table that shows all six combinations of years and months. This should help reinforce what was discussed:

Common Years				Leap Years			
Month	Deficit	Reg.	Full	Month	Deficit	Reg.	Full
Tishri	30	30	30	Tishri	30	30	30
Heshvan	29	29	30	Heshvan	29	29	30
Keslev	29	30	30	Keslev	29	30	30
Tebet	29	29	29	Tebet	29	29	29
Shebat	30	30	30	Shebat	30	30	30
Adar	29	29	29	Adar	30	30	30
V'Adar	—	—	—	V'Adar	29	29	29
Nisan	30	30	30	Nisan	30	30	30
Iyar	29	29	29	Iyar	29	29	29
Sivan	30	30	30	Sivan	30	30	30
Tammuz	29	29	29	Tammuz	29	29	29
Ab	30	30	30	Ab	30	30	30
Elul	29	29	29	Elul	29	29	29
Totals	353	354	355		383	384	385

Determining the Day of the Week of the Molad of Tishri

In computing the day upon which the Molad of Tishri falls, it is necessary to measure from a benchmark. This is the date generally used for all calendar calculations. The benchmark is the Molad of Tishri, 3761 BC. Specifically, *that* Molad of Tishri was on the 1st day of the week, the 23rd hour and 204th part. You will see how this benchmark is used in calculations.

Suppose we needed to find the day of the week on which the Molad of Tishri falls in any given year. Keep in mind that if the days of a year were evenly divided by 7, then the Molad of Tishri would fall on the same day of the week on the following year. Since all years do not have an equal number of weeks, we need to calculate the number of days exceeding an even number of weeks in a given year. Once we know this, we can easily tell the day of the week on which the corresponding Molad of Tishri will fall.

Three more facts are necessary in calculating the day of the week for the Molad to occur:

- (1) The average common year exceeds an even number of weeks by:
4 days, 8 hours, 876 parts
- (2) The average leap year exceeds an even number of weeks by:
5 days, 21 hours, 589 parts
- (3) A 19-year time cycle exceeds an even number of weeks by:
2 days, 16 hours, 595 parts

One clear fact should emerge from the study of the 7-day weekly cycle. We saw that the calendar makes no alterations on the weekly cycle in any way. Again, some have implied that the calendar adjustments shift the weekly Sabbath. This has never been the case.

At this point, we will delay the introduction of new concepts and walk through a simple series of calculations in order to better familiarize you with the concepts presented thus far. We are now ready to determine the day of the week of the Molad by applying the concepts that have been briefly introduced.

In this first calculation, we will find the day of the week in which the Molad of Tishri occurred in AD 1964. We will only be looking for the day of the week (1st, 2nd, 3rd, etc.), rather than the day of the month. The method is simple, but accurate to the point that we can be 100 percent sure of the answer—as long as the calculation is correct. Again, the purpose of walking through these calculations is to demonstrate the accuracy of the various techniques of finding the respective solutions. Do not worry about remembering the exact sequence or the exact details of these demonstrations. As already emphasized, the intent of covering these points is to give the reader an overview and appreciation for the exactness and methodical structure of God's calendar.

1964 as a Sample

To determine the day of the week in which the Molad of Tishri fell in the year AD 1964, we first establish the span of years between the benchmark of 3761 BC and the year AD 1964 ($3,761 + 1,964 = 5,725$).

Now, in counting from any year in the AD span of time, back to the benchmark of 3761 BC, we must subtract 1 since there is no year zero ($5,725 - 1 = 5,724$). So there are 5,724 years between the benchmark and 1964.

Next, we divide this number by the number of 19-year time cycles to simply determine how many time cycles are contained in this span of time ($5,724 / 19 = 301$ plus 5 years left over).

If you use a calculator, you get 301.2631578. The .2631578 is equivalent to 5 years. You can multiply that decimal expression by 19 to get 5 years, or simply divide 5,724 by 19, using old-fashioned long division and you will get a remainder of 5.

Now we take these 301 time cycles, with the 5 years left over, as the basis for our calculation. We will take the 301 and multiply by the amount that every 19-year time cycle exceeds an even number of weeks. (This was covered in the preceding section and will be presented again below.)

Next we will take the 5 years left over and classify these 5 years into the number of common years and the number of leap years. This process is simple. We look at the 19-year time cycle pattern and simply observe how many of these years are common (not underlined) and how many are leap years (bold and underlined).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

In counting from 1 to 5, we find that 4 of the years are common and only 1 is a leap year. So we will multiply 4 by the amount of time that a common year exceeds an even number of weeks. Then we will add the length of time that one leap year exceeds an even number of weeks.

Now we will write out these expressions (as introduced in the preceding pages):

301 multiplied by 2 days, 16 hours, 595 parts (301 X [the excess occurring in each time cycle])

4 multiplied by 4 days, 8 hours, 876 parts (4 X [the excess occurring in each common year])

1 multiplied by 5 days, 21 hours, 589 parts (1 X [the excess occurring in each leap year])

These respective expressions will be expanded as they are multiplied:

602 days	4,816 hours	179,095 parts	(the excess in 301 time cycles)
16 days	32 hours	3,504 parts	(the excess in 4 common years)
<u>+ 5 days</u>	<u>21 hours</u>	<u>589 parts</u>	<u>(the excess in 1 leap year)</u>
623 days	4,869 hours	183,188 parts	(total)

Earlier, we explained how to reduce terms when we began the sections on calculations. We now take the above total and reduce it to the lowest terms: 832 days, 22 hours, 668 parts (the reduced total).

Next, this reduced total is divided by 7 to see how many days exceed an even number of weeks. So $832 / 7 = 118$ weeks plus 6 days left over. This excess is 6 days, 22 hours, 668 parts.

This excess amount indicates how far forward the Molad of Tishri moved in the span of time between 3761 BC and AD 1964. Now we have to add this excess to the exact time of the Molad of Tishri of 3761 BC

1 day	23 hours	204 parts	(Molad in 3761 BC)
<u>+6 days</u>	<u>22 hours</u>	<u>668 parts</u>	<u>(forward movement since 3761)</u>
7 days	45 hours	872 parts	(total)
8 days	21 hours	872 parts	(reduced to lowest terms) Now subtract 7 days to determine excess.
1 day	21 hours	872 parts	(final answer)

This final answer shows that, in AD 1964, the Molad of Tishri occurred on the 1st day of the week, at the 21st hour and 872nd part. This would be Sunday at about 9:00 PM, according to the Roman reckoning of the day from midnight to midnight.

You observed in this calculation that a definite sequence of procedures had to be carried out in an orderly fashion. The calculation revealed the precise day of the week of the Molad of Tishri in 1964.

This same procedure would have been used to calculate the day of the week for the Molad of Tishri for any other year, as well. The calendar is extremely precise and the calculations can be depended upon to project any future Molad with equal precision.

We will also see how the calculations can be extended to the day of the month. But first a short review will be helpful.

Determining the Day of the Month of the Molad of Tishri

Before introducing any new concepts, a brief review would reinforce what has already been covered. A 19-year time cycle includes 12 common years and 7 leap years. The linear pattern previously used shows the breakdown of years:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Counting the years not underlined in this pattern gives us the 12 common years. The underlined years are the 7 leap years.

Recall these previously covered facts:

- (1) An average common year exceeds an even number of weeks by 4 days 8 hours 876 parts.
- (2) An average leap year exceeds an even number of weeks by 5 days 21 hours 589 parts.
- (3) A 19-year time cycle exceeds an even number of weeks by 2 days 16 hours 595 parts.

Besides these points, remember that the benchmark for calculations is the Molad of Tishri 3761 BC This Molad occurred precisely on the 1st day at 23 hours and 204 parts.

Having covered this brief review, you should now be familiar with the technique used to determine the day of the month for the Molad of Tishri. As the calculations are explained, keep in mind that you don't have to memorize the facts or procedures. We are walking through this process to give you the general understanding as to how the solutions are derived. Without having seen this performed in a general way, it would not be possible to appreciate the incredible precision of the Hebrew calendar.

Now we need to express the 19-year time cycles in Julian years, which consist of 365 1/4 days. We now extend this expression:

$$\begin{array}{r}
 365 \text{ days } 6 \text{ hours} \\
 \underline{\quad \quad \quad \times 19} \\
 \text{Total days (Julian) in a 19 year cycle} = 6,935 \text{ days } 114 \text{ hours} = \\
 6,939 \text{ days } 18 \text{ hours (reduced)} = \\
 6,939 \text{ days } 17 \text{ hours } 1,080 \text{ parts (equivalent)}
 \end{array}$$

$$\begin{aligned} \text{Total days (Hebrew) in a 19 year cycle} &= \\ & \quad 6,939 \text{ days } 16 \text{ hours } 595 \text{ parts} \\ \text{The difference in the 19 Julian years and the 19 Hebrew years} &= \\ & \quad 1 \text{ hour } 485 \text{ parts} \end{aligned}$$

Since this is a calculation of Hebrew dates, the difference is expressed as -1 hour 485 parts. This difference in the 19-year cycles is expressed in Julian years as opposed to Hebrew years, because the calendar now in use by most of the world is the Roman calendar. If the whole world observed God's sacred calendar, we would not need this translation procedure.

Above, we considered the difference in the two relative measurements of time for 19-year time cycles. Now we consider the difference in common years (for Julian vs. Hebrew). These differences are expressed below:

$$\begin{aligned} \text{Julian year} & \quad -(365 \text{ days } 6 \text{ hours } 0 \text{ parts}) \\ \text{Hebrew common year} & \quad \underline{354 \text{ days } 8 \text{ hours } 876 \text{ parts}} \\ \text{difference:} & \quad -10 \text{ days } 21 \text{ hours } 204 \text{ parts (reduced)} \end{aligned}$$

Here, we consider the difference between leap years:

$$\begin{aligned} \text{Hebrew leap year} & \quad 383 \text{ days } 21 \text{ hours } 589 \text{ parts} \\ \text{Julian year} & \quad \underline{-(365 \text{ days } 6 \text{ hours } 0 \text{ parts})} \\ \text{difference:} & \quad +18 \text{ days } 15 \text{ hours } 589 \text{ parts} \end{aligned}$$

We can now apply these translation patterns to the following spans of time that we used in the previous section to determine the day of week for the Molad of Tishri of AD 1964. We are interested in the day of the month for that same Molad. Thus, from 3761 BC to AD 1964, we must consider the following:

$$\begin{aligned} & (301) \text{ 19-year time cycles} \\ & \quad 4 \text{ common years} \\ & \quad 1 \text{ leap year} \end{aligned}$$

This calculation is surprisingly simple, and similar to the technique used to establish the day of the week. We will quickly walk through the steps. First, we take the difference in the 19-year time cycles expressed in Julian years as opposed to Hebrew years. We saw that this difference is -1 hour and 485 parts. Multiply this by 301 since there are 301 of the 19-year time cycles involved here, as indicated in the preceding paragraph. Then we will multiply the 4 common years by the difference that applies to the common years. Next, we multiply the 1 leap year by the difference that applies to leap years. Following is an extensive calculation and chart. All of these factors will be illustrated here:

$$\begin{array}{r}
 -1 \text{ hour } 485 \text{ parts (the difference that applies to the 19-year time cycles)} \\
 \quad \underline{\quad \quad \quad \times 301 \text{ (19 year time cycles)}} \\
 -301 \text{ hours } 145,985 \text{ parts} \\
 -10 \text{ days } 21 \text{ hours } 204 \text{ parts (the difference that applies to common years)} \\
 \quad \underline{\quad \quad \quad \times 4 \text{ (common years)}} \\
 -40 \text{ days } 84 \text{ hours } 816 \text{ parts} \\
 \\
 +18 \text{ days } 15 \text{ hours } 589 \text{ parts (the difference that applies to leap years)} \\
 \quad \underline{\quad \quad \quad \times 1 \text{ (leap years)}} \\
 +18 \text{ days } 15 \text{ hours } 589 \text{ parts}
 \end{array}$$

We now take the negative totals and combine them. This is then combined with the positive term and the final figure is reduced.

$$\begin{array}{r}
 -(301 \text{ hours } 145,985 \text{ parts}) \text{ (from 19-year time cycles)} \\
 \underline{-(40 \text{ days } 84 \text{ hours } 816 \text{ parts})} \text{ (from common years)} \\
 -(40 \text{ days } 385 \text{ hours } 146,801 \text{ parts}) \\
 + 18 \text{ days } 15 \text{ hours } 589 \text{ parts (from leap years)} \\
 \underline{-(22 \text{ days } 370 \text{ hours } 146,212 \text{ parts})} \text{ (total difference from Hebrew to Julian)} \\
 \underline{-(43 \text{ days } 1 \text{ hour } 412 \text{ parts})} \text{ (reduced)}
 \end{array}$$

To apply the above difference, we must begin by listing the Benchmark in Julian terms:

October 6th	23 hours	204 parts	(Benchmark)
September 36th	23 hours	204 parts	(equivalent month; add 30 days and back up 1 Julian month)
August 67th	23 hours	204 parts	(equivalent month; add 31 more days and back up another month)
<u>-(43 days</u>	<u>1 hour</u>	<u>412 parts)</u>	(the total difference subtracted from equiv- alent Benchmark)
August 24th	21 hours	872 parts	(preliminary answer not yet adjusted for Julian Greg- orian errors)

Please note that the dates of September 36th and August 67th are not misprints. These are “equivalent months”—steps that are taken in order to exceed the value of the 43 days above. We will next proceed to adjust the preliminary answer of August 24th, 21 hours, 872 parts.

In the section titled, “Introductory Overview of the Calendar,” near the beginning of this booklet, the issue was discussed as to how the Gregorian

calendar made adjustments to compensate for errors in the Julian calendar. Included here is a brief chart that breaks down the exact adjustments since AD 1582.

Years	No. of days dropped from Julian calendar	
1582-1599	10	
1600-1699	10	(1600 evenly divisible by 400)
1700-1799	11	
1800-1899	12	
1900-1999	13	
2000-2099	13	(2000 evenly divisible by 400)

We will now examine another adjustment consideration due to the Julian/Gregorian leap years. The common Julian or Gregorian year is exactly 365 days, which is 1/4 of a day shorter than the average year of 365 1/4 days. Because of this, for each of the 3 years following a leap year, 6 hours must be added.

If the year in question is a leap year, then add 0 hours.

If the year in question is 1 year after a leap year, then add 6 hours.

If the year in question is 2 years after a leap year, then add 12 hours.

If the year in question is 3 years after a leap year, then add 18 hours.

Returning to our example of AD 1964, we had -43 days, 1 hour and 412 parts for the difference resulting from all the intervening years.

-(43 days	1 hour	412 parts)	
+13 days			Julian/Gregorian leap year correction
<hr/>			1964 was a leap year
	0 hours		Total adjusted difference in Hebrew
-(30 days	1 hour	412 parts)	and Julian/Gregorian

So we go back and subtract the difference from the equivalent month of the Benchmark:

October 6th	23 hours	204 parts (Benchmark)
September 36th	23 hours	204 parts (equivalent month; add
		30 days and back up 1
		Julian month)
<hr/>		
-(30 days	1 hour	412 parts) (total adjusted differ-
		ence)
September 6th	21 hours	872 parts (reduced)

The date of September 6th was the Julian date for Tishri 1, 1964. Notice the hours and the parts. *They amount to 21 hours and 872 parts.* The final

answer that established Tishri 1, 1964 as the 1st day of the week *also indicated 21 hours and 872 parts*—exactly as we found for September 6th of 1964.

These procedures are not haphazard, but rather are detailed and precise. Having to translate this time to the Julian calendar is somewhat involved, as we observed, but it is consistent and accurate. One can project to any year in the future and precisely pinpoint the day of the week of the Molad of Tishri and the Julian day of the month on which this falls. *The hours and the parts for the Molad of Tishri will always be the same exact amount from both phases of calculation—day of week and day of month. The fact that these remaining elements must agree serves as a parity check that our calculations are correct!*

After going through so many steps to realize the final answer, there exists one more criterion before we realize the ultimate “final answer.” We will obtain this after allowing our proposed day and date for Tishri 1 to be checked by the “filtering process” of postponements.

In the calculation above, we have determined that Tishri 1 in 1964 fell on September 6th, on a Sunday evening at 21 hours, 872 parts. Remember, this was discussed as being Sunday at about 9:00 PM, according to the Roman reckoning of the day from midnight to midnight. By postponement rule one, the date of Tishri 1 would have been moved forward by one day since the Molad occurred after 12:00 noon on Sunday. (Even if the Molad occurred *before* 12:00 noon on Sunday, rule two would still have advanced Tishri 1 to Monday since this pivotal day could never fall on Sunday, anyway.)

Therefore, we conclude that in the year of 1964, Tishri 1 fell on Monday, September 7. The filtering process of postponements yields the final approved answer!

Illustrations Help

The last few pages have been for the purpose of illustrating the basic calculation for the sacred calendar and for translating these times into the Julian/Gregorian calendar terms. One must understand that many additional calculations could be given, to reinforce these new concepts of calculations, but the point should have been made. We have walked through one example that served to illustrate the detailed procedures in calculating the Molad of Tishri.

Certain tables have been produced which greatly simplify and streamline the process of calculating the Molad of Tishri for any given year. Besides these tables, there are computer programs in which you merely respond to “prompts” about the Molad of Tishri. By simply typing in a year, such as 2005, the program presents the complete answer—the day of the week, day of the month for the Molad of Tishri and much more information. But one could not fully appreciate such technological shortcuts without previous experience of walking through manual calculations as presented in this Appendix.

For the reader who wishes to go further, other somewhat related booklets and articles published by The Restored Church of God, which involve precise days and times, are included here:

- Saturday or Sunday – Which Is the Sabbath?
- Christ’s Resurrection Was Not on Sunday
- God’s Holy Days or Pagan Holidays?
- The Sabbath – Has *Time* Been Lost?
- “Christ’s Crucifixion Was Not on Friday”
- “How to Count Pentecost”

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