This year’s calendar

How to understand it
How to calculate it

Contents

A. Introduction and overview

B. Days and months

C. Yomim Tovim and Sidros

Contents

Introduction and overview

We are going to see how to calculate the Jewish calendar for a year.
All we need to know is the number of the year. This year is תשע"ט – 5779.

Here is an overview of the steps we will follow:

1) Decide if this is a regular year (פשוטה) or leap year (מעוברת).
2) Find the molad for this Rosh Hashanah.
3) Find the molad for the *next* Rosh Hashanah.
4) Find the calendar days for this and the next Rosh Hashanah.
5) Find all the days of Rosh Chodesh, and all the yomim tovim.
6) Determine the Torah readings (סדרות).

Overview, part 1

Decide if this is a regular year (פשוטה) or leap year (מעוברת).

- The Torah requires the months to track the cycles of the moon.
- The Torah requires the years to track the seasons of the (solar) year.
- To keep them in synch, we sometimes add an extra month.
- There is a repeating nineteen-year cycle of regular and leap years.
- The number of the year we are calculating will tell us which one it is.

Overview, part 2

Find the molad for this Rosh Hashanah.

- That is, the astronomical moment of the new moon for Tishrei of this year.
- Chazal made the approximation that all months are exactly the same length, from one new moon to the next.
- That amount is not an exact number of days; they estimated it nearly to the second.
- By knowing the number of years since Creation, knowing the starting point, and knowing the length of a month, we calculate the moment of the molad.
- This is an exact time, not a day.

Overview, part 3

Find the molad for the *next* Rosh Hashanah.

- We repeat the process for the following year.
- To the result for *this* Rosh Hashanah, we need only add twelve more months worth of time (for a regular year), or thirteen (for a leap year), to get the molad for next year.
- Again, this is an astronomical moment in time, not a day.

Overview, part 4

Find the calendar day for each Rosh Hashanah.

- Very often Rosh Hashanah will be on the same day as the time that the molad we calculated falls.
- However, there are four rules that may cause it to be moved to the next day, or the day after.
- These are known as the Four Dechiyos (ד' דחיות).
- Each resulting Rosh Hashanah is a day of the week on the calendar now, not a moment in time.

Overview, part 5

Find all the days of Rosh Chodesh, and all the yomim tovim.

- Once we know whether the year is a regular or leap year, and which days are Rosh Hashanah at the beginning and end, we can figure out the total number of days in the year.
- That tells us the lengths of each of the months, and gives us the days of Rosh Chodesh for each month.
- Each of the yomim tovim is on a particular date in the calendar and is now determined.

Overview, part 6

Determine the Torah readings.

- Now that the calendar is set up, we can see how many weekly Torah readings are needed.
- We decide how many parshiyos need to be doubled up to fit.
- This was already done by Chazal for every possible calendar, but the קדמונים gave some rules for how they decided which ones to double up.
- The results can be different in Eretz Yisroel and in the Golus.

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B) Days and months

Let’s go through the steps to get the calendar for a year - and do it for *this* year.

1) Introduction – how to calculate
2) Peshuta or m’uberes?
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1) Introduction – how to calculate

How to calculate

- We use **day** of the week (1-7), **hours**, **chalakim** (reversed order in Hebrew).
- The hours are measured from 6 pm, so 18 = 12 noon, etc.
- All our calculations will use this triplet of numbers.
- We don't normally need to worry about the weeks at all. It is enough to determine the time within the week.
- 24 hours = 1 day, 1080 chalakim (3⅓ sec.) = 1 hour. Just keep carrying.

How to calculate - example

- If you'd want to add 4 days, 18 hours, 443 chalakim (ד, יח, תמג) to 5 days, 20 hours, 742 chalakim (ה, כ, תשמב):

  443+742 = 1185 = 1 hour (=1080 chalakim) + 105 chalakim.

  18 + 20 + 1 (which was carried) = 39 = 1 day + 15 hours.

  4 + 5 + 1 = 10 = 1 week (ignore) + 3 days.

  The result: 3 days, 15 hours, 105 chalakim (ג, טו, קה).

- This is how all these calculations are done.

How to calculate - standard shifts

Everything we need for the molad are sums of multiples of the following *five shifts*:

- Initial - Our tradition is that the calendars's *starting point* is in the beginning of the _year_ zero, but at בהר"ד:
  Monday, 5 hours, 204 chalakim
- One molad – shift for one lunar month = אי"ב תשצ"ג:
  1 day (really 29 days - but we ignore the weeks), 12 hours, 793 chalakim
- Shana peshutah - 12 of these months = ד"ח תתע"ו:
  4 days, 8 hours, 876 chalakim
- Shana m'uberes - 13 of these months = הכ"א תקפ"ט:
  5 days, 21 hours, 589 chalakim
- 19 year cycle - 19 years with 7 m'ubaros and 12 peshutos = בי"ו תקצ"ה:
  2 days, 16 hours, 595 chalakim

Calculator

So you don’t have to do this yourself:

- I'm including two calculators (Excel & html) in the \KV folder. It is also on a separate Google Sheet, Calculator; make yourself a copy.
  Or download this one: Excel Calculator. Or use this one: Calculator.
- Don’t alter the Inputs. Change the multiplier (like, x12) in the right-most column for any of the Inputs, which are the five standard shifts described above.
- It will do the modular arithmetic and carrying for you.

We’ll see examples soon.

2) Peshuta or m’uberes?

	This year:
• The regular years (peshutos) and leap years (m'ubaros) are in a repeating nineteen year cycle.	
• Take the number of the year, take the remainder divided by 19.	• 5779 mod 19 = remainder 3
• The siman גו"ח אדז"ט tells which ones are leap years: 3,6,8,11,14,17,19.	• So this year is “ג”, a **leap year (מעוברת)**.

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3) Find the molad for this year’s Tishrei

(If you know last year's molad it's easier - see next year for what to do. Otherwise,)	**This year:**
1. The starting point is the year zero, בהר"ד (Monday, 5 hours, 204 chalakim	• **(2,5,204)**
2. Find the number of 19 year cycles	• **5779**\19 = **304** 19-year-cycles
3. Add (the number of 19 year cycles) * (the shift בי"ו תקצ"ה, for each one)	• 304 * (2,16,595) = **(5,15,520)**

3) Find the molad for this year's Tishrei, **cont.**

	This year:
4. Using גו"ח אדז"ט, see how many peshutos (P) and how many m'ubaros (M) there have been already in this cycle.	• 5779#19 = remainder 3, so 2 peshutos so far, no m'ubaros. **P=2, M=0**.
5. Add the shift for each: (P * ד"ח תתע"ו) + (M * הכ"א תקפ"ט)	• (2*(4,8,876)) + (0*(5,21,589)) = **(1,17,672)**
Add _all of these_ [i.e., the results of 1., 3., and 5.] up for this year's molad.	• = **(2,14,316)**
	(On the Calculator, you would enter multipliers **1, 304, 2, 0, 0, 0** to get this result.)

3) Find the molad for this year's Tishrei, cont.

	This year:
6. (If you actually want the molad for a *different* month, say for announcing the molad in shul, also add the number of additional months * אי"ב תשצ"ג)	• Say for Cheshvan for this year: 1 additional month, so add (1,12,793) to the **(2,14,316)** we got for Tishrei. **= (4,3,29)** **= Wednesday, 9 pm [3 hours after 6 pm], 29 chalakim.**
	• (On the Calculator, the multipliers are now **1, 304, 2, 0, 1, 0**.)

3) Repeat: Find the molad for *next* year's Tishrei

	This year:
• Add one more year's shift, either peshuta (ד"ח תתע"ו) or m'uberes (הכ"א תקפ"ט) whichever this year is.	• 5779#19 = remainder 3. 3rd year, add one m'uberes shift (5,21,589) to (2,14, 316) from above = **(1,11,905)**
	• (On the Calculator, the multipliers are now **1, 304, 2, 1, 0, 0**.)
• We now have the molad for Rosh Hashanah this year, and next year. • They are **exact times**, not days.	• **(2,14,316)** and **(1,11,905)**

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4) Find Rosh Hashanah – the four dechiyos

	This year:
• Now we need to find the actual days of the week of the two Rosh Hashanos. Normally they are each on that day of the week *when their molad was*. • However - there are four situations where they are moved *later*.	• This time, those days would be Monday for this year (from **2**,14,316 calculated above), and Sunday for next year (from **1**,11,905 calculated above)

4) Find Rosh Hashanah – the Four Dechiyos

The ד' דחיות, situations where they are moved *later*:

a) מולד זקן

b) לא אד"ו ראש

c) ג"ט ר"ד

d) בט"ו תקפ"ט

4a) The four dechiyos - מולד זקן

	This year:
• For each Rosh Hashanah's molad, is the hour after noon (18 hours in our system measuring from 6pm)? • If so, move it to the next day.	• (2,**14**,316), (1,**11**,905): neither of these is after noon.

4b) The four dechiyos - לא אד"ו ראש

	This year:
After you did the first dechiyah:	
• For each Rosh Hashanah, is the day now Sunday, Wednesday, or Friday? (**אד"ו** = **1**, **4**, **6**)	• This year's RH (**2**,14,316) is on Monday, it doesn't change.
• If so, move it to the next day. Those days are not allowed.	• Next year's RH (**1**,11,905) is on Sunday – not allowed - so it moves up to Monday instead.
	• Now both are on Monday.

4) The four dechiyos, cont.

Last two dechiyos – בט"ו תקפ"ט and ג"ט ר"ד

- There are two more rules ("dechiyos") that have to do with the *length of the calendar year*.

Background we'll need:

- A year may only have three lengths: short (חסרה), medium (כסדרן), and long (שלמה).
- Chaseirah is one day shorter than k'sidrah, sheleimah is one day longer. (We'll see how this works in the section on the lengths of the months.)
- You can tell which it is by comparing *this year's Rosh Hashanah to next year's*.

Length of year - פשוטה

- The actual calendar doesn’t use times, i.e. hours and chalakim, just complete days.
- We saw that a regular year (פשוטה) has a *molad shift* of 4 days and 8+ hours.
- In the actual calendar - which uses days, not times - a short chaseirah year (353 days) has a shift of three days from one Rosh Hashanah to the next, say from Shabbos this year to Tuesday the next.
- A regular k'sidrah year (354 days) has a four day shift,
- and a long sheleimah year (355 days) has a five day shift.
- These are all the choices that are allowed.

Length of year - מעוברת

- A leap year (מעוברת) has a molad shift of 5 days, 21+ hours.
- In the actual calendar, a chaseirah leap year (383 days) has a shift of five days from one RH to the next (such as from Monday to Shabbos).
- A k'sidrah (384) has a six day shift.
- A sheleimah (385) has a seven day shift - that is, the two Rosh Hashanos are on the same day of the week.
- These are all the choices that are allowed.

4c) The four dechiyos – ג"ט ר"ד

	This year:
• When you calculate the two days of RH and do the first two dechiyos, you occasionally find that the second one moved forward too far, so the year ends up one day longer even than a "sheleimah" – not allowed. • You fix it by moving the first RH forward as well. • It turns out that this only happens in one case: a regular פשוטה year, when the first RH falls on Tuesday, after 9 hours, 204 chalakim (therefore called (ג"ט ר"ד). • But then it moves *two* days forward, as RH can't fall on Wednesday either (rule (2), לא אד"ו ראש).	• Not this year. It last happened in 5772.

4d) The four dechiyos - בט"ו תקפ"ט

	This year:
• In the reverse direction, you can sometimes find that the first RH moved forward too far, and the year is one day shorter even than a "chaseirah" - too short. • You fix it by moving the *second* RH forward one day as well. • It turns out this also only happens in one case: a leap year (מעוברת), and only when the second RH falls on Monday, after 15 hours, 589 chalakim (therefore called בט"ו תקפ"ט). It gets moved to Tuesday.	• Not this year. It last happened RH 5766 (at the end of 5765).

4) The four dechiyos, cont.

	This year:
• After applying these four rules, where applicable, we have the day of the week for Rosh Hashanah, both at the beginning and at the end of the year.	• This year is a leap year (מעוברת). From above, both RHs this year ended up on Monday, so it is **long** (**שלימה**).

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Now we determine the length of each of the months.

- Months can be either 29 days (חסר) with one day of Rosh Chodesh at the end, or 30 days (מלא), ending with two days of Rosh Chodesh.
  - The first day of Rosh Chodesh, if there are two, is the 30th day of the previous month. The *last* day of Rosh Chodesh is always the 1st of the next month.
- They must combine to form the right length year: as we saw, 353, 354, or 355 for a regular year, 383, 384, or 385 for a leap year.
- Most months have a specific length, alternating:
  - Tishrei 30, Teves 29, Shvat 30, Adar 29, Nisan 30, Iyar 29, Sivan 30, Tammuz 29, Av 30, Elul 29 – always.
- In a leap year, Adar I is added with 30 days and Adar II has 29.

5) Establish the months, cont.

	This year:
• Only two months, Cheshvan and Kislev, can vary: either 29 or 30 days. That's why there's a three-day range for the length of the year. In a chaseirah both Cheshvan and Kislev are 29. In a k'sidrah Cheshvan is 29 and Kislev 30. In a sheleimah both are 30. • All we need to know is (a) if it's a leap year, and (b) if it's chaseirah, k'sidrah, or sheleimah. With that we can establish all the months.	• This year is a **leap year** and a **sheleimah**. • So the sequence this year is Tishrei 30, Cheshvan **30**, Kislev **30**, Teves 29, Shvat 30, Adar I **30**, Adar II **29**, Nisan 30, Iyar 29, Sivan 30, Tammuz 29, Av 30, Elul 29. Total days: 385

5) Establish the months, cont.

- We’ve seen that only three things vary in the calendar: Cheshvan, Kislev, and whether there’s a second Adar.
- What that means: The entire calendar from the last Adar onward is always the same.
  From Adar II and Purim, Nisan and Pesach, all the way through the next Rosh Hashanah (really through Cheshvan) is an identical span for all calendars (just shifted by the day it starts).
- The result: If you know the day of the week for any one of those days, you know all the rest.

5) Establish the months, cont.

- “If you know the day of the week for any one of those days, you know all the rest.”
- See Tur Orach Chaim 428 for a mnemonic using this (“אתּ-בש"):
  - 1st day of Pesach (א) same day as Tisha B’Av (ת)
  - 2nd day of Pesach (ב) same day as Shavuos (ש)
  - 3rd day of Pesach (ג) same day as Rosh Hashanah (ר)
  - 4th day of Pesach (ד) same day as Krias HaTorah (Simchas Torah) (ק)
  - 5th day of Pesach (ה) same day as Tzom (Yom Kippur) (צ)
  - 6th day of Pesach (ו) same day as the *previous* Purim (פ)

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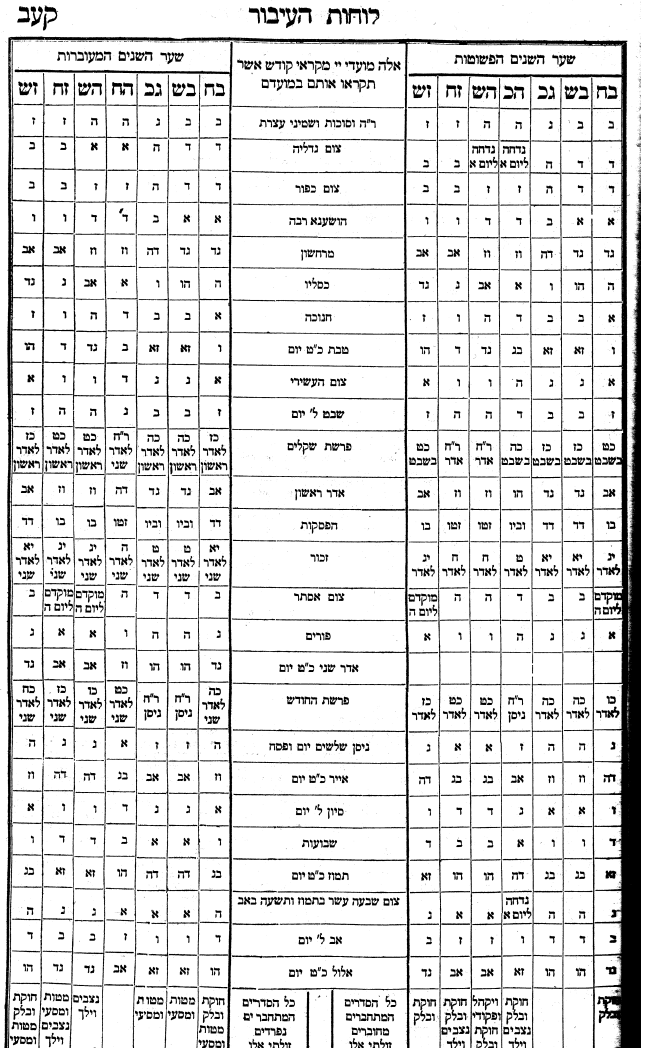
Pick a calendar – the Keviyus page

- We can now lay out the calendar for the entire year. To help you visualize this, open the file Keviyus.htm included here in the \KV folder. (Check for viruses and unzip first). It is a self-contained web page that shows all the possible calendars.
- Go ahead, do that now!
- It can also be downloaded at https://drive.google.com/open?id=0B1_EiCPi0cabd0RPa1R2bFdGLUU

The Keviyus page, cont.

- The page is based on a chart in the Tur, Orach Chaim, 428.



The Keviyus page, cont.

- For more instructions on using the Keviyus page, see the separate presentation “The Keviyus page”.

C) Yomim Tovim and Sidros

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Pick a calendar, cont. – find the calendar for the year

	This year:
• You'll see a total of 14 choices, 7 for regular years, 7 for leap years. • First choose the correct side - regular or leap year. Resize so all 7 for that side are visible.	• This year is a leap year. If the page header is פשוטה, click on the right-hand pane and scroll left, or click the "מעוברת" button.
• Choose the correct calendar from those seven. • The first letter in the title at the top is the *day of the week of the initial Rosh Hashanah*. • The second is "ח" for chaseirah, "כ" for k'sidra, "ש" for sheleimah.	• Rosh Hashanah at the beginning of this year is Monday - ב, the year is sheleimah. So the title should begin with בש. That matches בש"ז: the second one from the right.

Pick a calendar, cont.

	This year:
What about the *last* letter of the title (not in the Tur's chart, but common since then)? • That letter indicates the day of the week when Pesach falls. That day is actually determined by the first two, and is just given for convenience. • One result of it is that all fourteen calendars have unique titles.	• This year Pesach begins on Shabbos (ז), as you can see by scrolling down on that calendar. So the correct calendar is titled בש"ז.

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Yomim Tovim

	This year:
• Each of the yomim tovim has a fixed date in the calendar. • It is easy now to fix their days of the week, just by adding them to the months on the correct date. But:	• Scroll down through calendar בש"ז to see where this year's yomim tovim fall.
• Chanukah is always eight days, whether Rosh Chodesh Teves is one day or two, so Chanukah may end on 2 Teves or 3 Teves.	• This year Rosh Chodesh Teves is two days, so Chanukah ends on 2 Teves.
• Fast days get pushed forward if they fall on Shabbos.	• 17 Tammuz and Tisha B'Av fall on Shabbos, so the actual fasts are on Sunday.

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Sidros - introduction

- Now we need to place the Sidros (parshiyos). It should be easy - they're in order!
- Three things make things more complicated.
  a) Yomim Tovim
  b) Counting parshiyos
  c) Eretz Yisroel and the golus

3a) Yomim Tovim

- If the major yomim tovim fall on Shabbos, they have their own reading - and the weekly sidrah waits for the next week.
- This applies to:
  Rosh Hashanah, Yom Kippur, all of Sukkos, all of Pesach, and Shavuos.
- Sukkos and Pesach can contain one or two Shabboses.

3b) Counting parshiyos

- Depending on
  - when Rosh Hashanah falls at the beginning and end of the year, and
  - how many yomim tovim interrupt,
- we find the total numbers of weekly sidros to read that year.
- There are 54 sidros (see the left-hand pane in the Keviyus page). Some may need to be doubled up, to fit the actual number of readings.
- [One of them is V’zos Habracha, and it is read on Simchas Torah – doesn’t count.]
- There are (about) four more weeks in a leap year (מעוברת) than in a regular year (פשוטה), so a regular year will need several more double parshiyos.

3b) Counting parshiyos, cont.

- The left pane on the Keviyus web page shows which sidros can be doubled – but not how to decide which ones actually are.
- We’ll do this in stages, going from one benchmark to another through the year.
- We’ll need to know how many Shabbos readings there are between each pair of benchmarks. It may vary with the different calendars.

3b) Counting parshiyos, cont.

- “We’ll need to know how many Shabbos readings there are between each pair of benchmarks. It may vary with the different calendars.”
- One way to do this: Hover over two benchmark dates, and see how many weeks and days into the year each one is, and thus how far apart they are.
- It can help to go to a view where the starting point lines up (at Rosh Hashanah, or at Pesach [and the rest of the year], using the “Line up by…” buttons.) You can also page down, which goes exactly one week at a time, or compare two copies of the page, one at the beginning and one at the end.
- Each week is one reading.
  As for the extra days, it depends whether Shabbos falls in between.

3c) Eretz Yisroel and golus

- The one-day yomim tovim in Eretz Yisroel can mean that the second day of yom tov falls on Shabbos, and takes over the Torah reading in golus -
- but not in Eretz Yisroel.
- That would mean that Eretz Yisroel has room for an extra parsha that year, compared to chutza la'aretz. It will jump a week ahead then, and stay ahead until chutza la'aretz has a double parsha and Eretz Yisroel not.

Sidros, cont.

	This year:
Scroll down your calendar for the year and see	
• where the parshiyos get pushed away by the major Yomim Tovim	• בש"ז leap year. On Shabbos: Chol Hamoed Sukkos, first day of Pesach - *and* the last day but only in golus.
• and how many times they need to be doubled to make things fit – to use all 54 sidros.	• We are only going to need one double parsha in chutza la'aretz (which turns out to be Matos-Masei) – and none at all in Eretz Yisroel.

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Sidros – Arranging the sidros

We do this in stages, working between benchmarks.

1) Beginning the year
2) Pesach
3) Shavuos
4) Tisha B’Av
5) Nitzavim-Vayeilech

Plus - some changes between Eretz Yisroel and the golus

1) Arranging the sidros – beginning the year

	On Keviyus page:
• No sidros are ever combined until Adar - in olden times they wouldn't know till then if it would be a leap year!	• Scroll down to Adar • It can help to open *two* calendars, side by side.
• In a regular year we need to catch up about four weeks, so in a leap year all of Vayakhel-Pekudei, Tazria-Metzora, Acharei-Kedoshim, Behar-Bechukosai are separate.	• Go from פשוטה years to מעוברת years (right to left) and compare – Nisan on one side, Adar II on the other.
• But three of these pairs are after Pesach. So regular years won't catch up to leap years until around Shavuos.	• Scroll to Pesach and Shavuos, checking both sides.

2a) Arranging the sidros – Pesach - פשוטה

	On Keviyus page:
• Parshas Tzav is always right before Pesach for a peshutah. • For six regular year calendars, this requires Vayakhel-Pikudei to be doubled: it's the only double parsha before Tzav. • But see הש"א. Bereishis is just after Simchas Torah, Tzav is just before Pesach – *just* room for one extra parsha (24 weeks + *two* days apart), so Vayakhel and Pikudei are separate.	• Check this for all calendars. • It can help to open *two* calendars, side by side – one near Simchas Torah, the other near Pesach. • Scroll down הש"א to see how the extra parsha fits, compared with the others. It only works because of the "ש" – a long year.

2b) Arranging the sidros – Pesach - מעוברת

	On Keviyus page:
• A leap year has 30 extra days, with (at least) 4 extra Shabboses. • There are *no* double parshiyos before Pesach.	• מעוברת side - • Scroll down to Metzora before Pesach. No double parshiyos at all!
• Regular years had Vayakhel-Pikudei doubled, so a מעוברת ends up 4-1=3 parshiyos ahead: Tzav, Shemini, Tazria, Metzora before Pesach.	
• For הח"א and הש"ג, there is room for *five* Shabboses, so Acharei Mos before Pesach instead.	• For both calendars starting with Thursday (ה) (27 weeks + 2 to 4 days apart), scroll to see the extra Shabbos.

3) Arranging the sidros – Shavuos

	On Keviyus page:
• There are exactly six Shabboses between Pesach and Shavuos.	• Scroll to show them. (It's easiest to use Line up by Pesach from here on.)
• The regular years catch up now, with Tazria-Metzora, Acharei Mos-Kedoshim, Behar-Bechukosai. • Both kinds of year get to Bamidbar just before Shavuos.	• See the regular years catch up.
• For leap years הח"א and הש"ג, we were already a week ahead before Pesach, so we can't help getting to Naso instead before Shavuos.	• For the calendars starting with Thursday (ה), scroll to see how it stays a week ahead.

4a) Arranging the sidros – Tisha B’Av

	On Keviyus page:
• This is where we catch up completely. • It doesn’t depend on regular or leap year – just on when Shavuos was. But it’s complicated!	
• Parshas Devarim is always right before Tisha B’Av. That’s 10 sidros from Bamidbar.	• In left-hand pane, see Bamidbar to Devarim.
• If there are 8 Shabboses after Shavuos, we need to combine two sets of sidros. • If there are 9 Shabboses after Shavuos, we’ll only combine one set of sidros.	• The two sets are Chukas-Balak, Matos-Masei. If just one, Matos-Masei.

4b) Arranging the sidros – Tisha B’Av, cont.

	On Keviyus page:
• The second day of Shavuos and Tisha B’Av are 8 weeks and 5 days apart. • If Pesach falls on Thursday, the last day of Shavuos falls on Shabbos.	• Start with calendars whose title ends ה“__.
• Then there are only 8 Shabboses before Tisha B’Av. • We combine Chukas-Balak and Matos-Masei. • [This case will be interesting again in (6) when we talk about Eretz Yisroel.]	• Count Shabboses till Tisha B’Av, and check the sidros. We end up with two sets of double parshiyos even for m’ubaros (בח"ה, זש"ה).

4c) Arranging the sidros – Tisha B’Av, cont.

	On Keviyus page:
• If Pesach does _not_ fall on Thursday, there are 9 Shabboses before Tisha B’Av, • so we only combine Matos-Masei.	• Start with those other calendars • See how an extra Shabbos falls in between.
• Special case of this: Pesach fell on Shabbos, and then Shavuos on Sunday. Tisha B’Av *would* have been on Shabbos as well and there would only be 8 Shabboses – but Tisha B’Av is moved to Sunday and there is a 9th Shabbos after all.	• Examine cases where Pesach falls on Shabbos (title ר“__)

4d) Arranging the sidros – Tisha B’Av, cont.

	On Keviyus page:
• Another special case: We saw in 2) and 3) that for הח"א and הש"ג, where Rosh Hashanah fell on Thursday in a leap year, we read Parshas Naso before Shavuos, one week ahead of the rest.	• Start with הח"א and הש"ג
• Here there are only 9 sidros left before Devarim, and again exactly 9 Shabboses. Even Matos and Masei separate.	• See that there are 9 Shabboses till Tisha B’Av, and that all the sidros separate.

5) Arranging the sidros – Nitzavim-Vayeilech

	On Keviyus page:
• Parshas Nitzavim is always right before Rosh Hashanah. • Though Tisha B'Av and the next Rosh Hashanah are 7 weeks and 2 days apart, there is no way to fit an extra Shabbos in between – • either because of "לא אד"ו ראש" : Rosh Hashanah is never on Sunday, • or because if Rosh Hashanah falls on Monday, Tisha B'Av was on Shabbos – and then got pushed off to Sunday.	• D'varim to Nitzavim is 7 sidros. • Check ז"__ calendars. [And look back at 4(c).]

5) Arranging the sidros – Nitzavim-Vayeilech, cont.

- Parshas Nitzavim is always right before Rosh Hashanah.
- That leaves Vayeilech and Ha'azinu. V'zos Habrocha is on Simchas Torah, doesn't count.
- There is exactly 1 Shabbos between Rosh Hashanah and Yom Kippur. If Rosh Hashanah falls on Monday or Tuesday, there will be *another* Shabbos between Yom Kippur and Sukkos.
- If so, Vayeilech will be needed for Shabbos Shuvah, and Ha'azinu before Sukkos.
- Otherwise, Nitzavim-Vayeilech is doubled.

On Keviyus page:

- When there's a Shabbos between Yom Kippur and Sukkos, see (at *end* of calendars) how that adds an extra parsha.
- Doesn't matter if the year is פשוטה or מעוברת.

6) Eretz Yisroel and golus

	On Keviyus page:
• Only two days can be a Yom Tov in chutza la'aretz and chol in Eretz Yisroel: Acharon shel Pesach and the 2nd day of Shavuos. • [Chol Hamoed overrides the leining anyhow, and Rosh Hashanah and Shemini Atzeres never fall on Friday.]	• For headers ending with ר"__ start with Acharon shel Pesach. • For headers ending with ה"__ start with Shavuos.
• When that happens, Eretz Yisroel is a week ahead of chutza la'aretz until we get a double parsha in chutza la'aretz and not in Eretz Yisroel.	• Follow the sidros till they rejoin. • They rejoin first chance they get. Except, we don't double Chukas-Balak instead of Matos-Masei.

Conclusion

- This year’s calendar is complete. Do it again next year!
- Thanks for watching!

Acknowledgements and References

- Tur, Orach Chaim, 428. The chart there is the basis of the Keviyus web page.
- Rabbi Nathan Bushwick, *Understanding the Jewish Calendar*, Moznayim, 1989.
- Rav David Heber’s yearly shiur on the calendar at Yeshiva Ner Yisroel, Baltimore.