Counting Tuplets

The understanding of Tuplets has been confusing to many of us for a long time, especially in understanding its definition, how to accurately count them, and play them "against" or in combination with "normally occurring" rhythms to form polyrhythms. This CoreBeat System® method will endeavor to simplify all this for you.

A Tuplet is defined as any group of notes that <u>involves</u> equally subdividing the Metric "pulse" of a measure or bar into a different number of subdivisions than what "normally occurs" within that Time-Signature, thus requiring "artificial" music notation that usually has the number of subdivisions shown above the group of notes. For clarity, sometimes a ratio ("#:#") is shown instead, where the 1st number is the number of notes in the Tuplet group and the 2nd number is the number of notes in the "normally occurring" group (e.g., "3:2" for an 1/8-note Triplet "1 Da Ta" versus "1 &").

The term "pulse" is being used here instead of "beat" because the latter is ambiguous, sometimes meaning the Metric count (e.g., the bottom number of a Time Signature), a broader pulsation, any hit on a drum, or an entire rhythm/groove. However, a "pulse" is more narrowly defined as the main rhythmic "throb," whether heard or felt. In Simple Meters (e.g., 2/4, 3/4, 4/4, etc.) the "pulse" is the same as the Metric count (e.g., 1/4-note counts: 1 2, 1 2 3, and 1 2 3 4, respectively). Thus in 4/4 Meter, the Metric pulse produces a "4-Feel" and if placed on the Bass Drum (BD) is called "4 on the Floor." Of course, you could play the same music with a broader 1/2-note "2-Feel" pulsation on Metric counts "1" and "3," but for the sake of creating Tuplets, think of the "pulse" as the Meter's natural pulsation before any further modification. In Compound Meters (e.g., 3/8, 6/4, 9/8, etc.) the Meter's natural pulse is a Dotted-note with a value (underlined) of three Metric counts (e.g, 123; 123 4 5 6, 123 4 5 6 7 8 9, respectively).

In a 3/4 Simple Meter example, where by definition the Metric pulses are "normally" subdivided by $2x2^{n-1}$ power (2, 4, 8, 16, 32, etc.), each of the 1/4-note pulses (bolded): "1 2 3" is "normally" subdivided into two, 1/8-notes: "1 & 2 & 3 &" or further into 4, 1/16-notes: "1e&a2e&a3e&a" or 8, 1/32-notes: "1DeD&DaD2DeD&DaD3DeD&DaD," etc. The subdivision of the Metric count always follows this rule, even for Compound Meters below. However, you could "artificially" subdivide the 1/4-note into 3, 1/8-notes to form an 1/8-note Triplet: "1 D T 2 D T 3 D T 4 D T" or further into 6, 1/16-note to form 2, 1/16-note Triplets or a 1/16-note Sextuplet: "1 D T & D T 2 D T & D T 3 D T & D T 4 D T & D T 7 and T & D T 7 and T 7

In a 6/4 Compound Meter example, where by definition the Metric pulses are "normally" divided by $3x2^{n-1}$ power (3, 6, 12, 24, 48, etc.), each of the Dotted 1/2-note pulses (bolded): "1 4" are "normally" subdivided into 3, 1/4-notes: "1 2 3 4 5 6" or further into 6, 1/8-notes: "1&2&3&4&5&6&" or 12, 1/16-notes: "1e&a2e&a3e&a4e&a5e&a6e&a," etc. However, you could "artificially" subdivide the Dotted 1/2-note into 2, 1/4-notes to form an 1/4-note Duplet, which requires 1/8-note subdivisions to accurately locate the played notes (bolded): "1&2&3&4&5&6&." This Tuplet did not require any new way of counting the subdivisions. However, if you subdivided each 1/4-note Metric count into 1/8-note Triplets, then of course these would be Tuplets because, as we've stated above, the Metric count subdivision always follows the 2x2ⁿ⁻¹ power (2, 4, 8, 16, 32, etc.) rule. But it's also a Tuplet because there are now 9 subdivisions of the Dotted 1/2-note pulses (bolded): "1DT2DT3DT4DT5DT6DT" instead of the "normally occurring" 6 subdivisions "1&2&3&4&5&6&."

Some Tuplets may extend over multiple Metric counts and even "over the bar line" depending on the Time-Signature. For example, 1/4-note Triplets (1 D T 3 D T) counted with 1/8-note Triplet subdivisions (bold and grey) take 2 Metric counts to complete (underlined): "1 D T 2 D T 3 D T 4 D T," etc. and in 4/4 Meter the "3 D T 4 D T" would complete by the end of the measure. However, if it were 3/4 Meter, this same 1/4-note Triplet would then be extended into the next bar for "over-the-bar-line phrasing." In either case, the 3, Triplet 1/8-note subdivisions are not what "normally occur" in these Simple Meters. Where 2, 1/4-notes "normally occur" there are now 3, Triplet 1/4-notes (bolded) "artificially" notated. That makes these Tuplets.

There seems to be no standard method for counting Tuplets. After considering the merits of other methods, an easier, more consistent method has been proposed below. The examples below are based on the Metric count being 1/4-notes (e.g., 1/4, 2/4, 3/4, 4/4, etc. Meters), but the same can be applied to Meters that have a different note-value receiving the count (e.g., Cut-Time or 2/2, 3/8, 3/16, etc.). Just remember the natural 1/2-note pulsation with Cut-Time (2/2), the Dotted 1/4-note pulsation in Compound Meters 3/8, 6/8, 9/8, 12/8, etc., and the Dotted 1/2-note pulsation in 6/4, 9/4, 12/4, etc.). The proposed method below for the CoreBeat System© will consider Tuplets up to 11 notes long, but you can still apply the method to those greater than this.

The strengths of the proposed CoreBeat System© Tuplet counting method are manifold:

- 1. It keeps track of the Metric count (i.e., 1, 2, 3, 4, etc.) as you are counting. This is the "heartbeat" of the music that establishes its tempo. In 4/4 (Common) Meter, the 1/4-note Metric count is like the 1/4-inch markings on a ruler, where the 1/8-inch and 1/16-inch markings are subdivisions of it. These Metric "beats," as many call them, are the "naturally occurring" stress points or "pulses" within a measure or bar of Time for Simple Meters. Some drumming styles emphasize them (e.g., 4-Feel House, Disco, Techno), whereas others play off the "beat" and thus termed "syncopated" (e.g., Ragtime, Funk, Ska). This "beat" is so important than many excellent teachers (e.g., Gary Chester in "New Breed") recommend being able to count and sing this Metric count regardless of what notes you are playing refer to the "CoreBeat System© Counting and Singing Method."
- 2. It preserves the older, well-established counting of "Straight" 1/8 notes as "1 & 2 &", etc. and "Straight" 1/16 notes as "1 e & a 2 e & a", etc., preferring the use of an ampersand "&" (counted as "and") over a mathematical "+" sign for the Simple Offbeat for the following reasons:
 - Over the years of teaching, so many students see the "+" sign and think they are to say "plus" instead of "and."
 - o The CoreBeat System© uses "+" when adding rhythms together, e.g., 1/4 Meter rhythms: "1 e & a" + "1 e & a" = the 2/4 Meter rhythm: "1 e & a 2 e & a."
 - O The artificially-notated subdivision "Ta" (abbreviated as "T") below can look too much like a "+" sign in the counting tables below, but a "&" is much more distinguishable.
 - o A "+" sign is often used in standard music notation to indicate a Hi-Hat being closed.
- 3. It introduces only two more sounds for counting all note-groupings that are not "naturally occurring" subdivisions of the Metric pulse: "Da," where the "a" is pronounced like "Dakota" and "Ta," where the "a" is pronounced the same way like "Tabasco." For brevity sake in notating rhythms, "Da" is abbreviated "D" and "Ta" is abbreviated "T" and kept as CAPITAL letters to help them stand out from

conventional lower case 1/16-note counting of "1 e & a." When "Da-Ta" is said quickly it sounds just like "Da-Da," a common way Jazz and Latin players already say rhythms. However, I chose not to use "da-da" in notating these rhythms because:

- O It's easier to see "DT" pairs than "DD" pairs (see #5 below).
- O Also, when discussing the subdivisions of the <u>same rhythm with the same number of subdivisions</u>, it's helpful to be able to differentiate them, e.g., "the Da of 1 and the Ta of 2" versus "the Da of 1 and the Da of 2" in reference to the 1/8-note Triplets "1 Da Ta 2 Da Ta," etc. I say "same rhythm with the same number of subdivisions" because if you refer to a different rhythm or the same rhythm but with a different number of subdivisions" then "Da" and "Ta" no longer refer to a unique subdivision, so you need to include this information in your references (see #4 below). Nevertheless, the <u>saying</u> of the 1/8-note Triplet rhythm above is still essentially "1 Da Da 2 Da Da," etc. making many musicians happy!
- 4. There is only one drawback in using the two new sounds "Da" and "Ta." As in #5 below, when they are repeated (D T D T DT, etc.) they obviously can't be as specific to a particular subdivision of a rhythm as Straight 1/16-note "e & a" delineations are. But since there are so many kinds of Tuplets, having unique subdivisions for them all would be impossible to remember or even say! There's also the problem when Tuplets are related to each other. For example, as we've seen in #3 above, an 1/8-note Triplet is a broader subset of a 1/16-note Sextuplet (see also "Counting 1/16-note Triplets" below) so that if 1/8-note Triplets are counted with their 1/16-note Triplet subdivisions, you get one counting: "1 D T & D T 2 D T," etc., where the greyed are part of the previous bolded note's value, but if counted with only 1/8-note Triplet subdivisions, then you get the much simpler "1 D T 2 D T," etc. Thus it looks like the 1/8-note Triplets "1 T D 2 T D," etc. are different than "1 D T 2 D T," etc. but they are the same rhythm! But it's important to remember that "Da-Ta" sounds like "Da-Da" as you say them quickly, so both 1/8-note Triplet versions really sound the same "1 Da Da 2 Da Da." Again, the new sounds "Da" and "Ta" are not meant to be unique subdivisions of Tuplets (or even the same Tuplet counted with different subdivisions) but place-keepers to help you count these "artificially" notated rhythms!

Therefore, if you want to refer to specific subdivisions, it's best to refer to not only the rhythm, but the number of subdivisions as well. Thus, using the examples above: "1 D T & D T 2 D T & D T," etc. or simpler "1 T D 2 T D," etc. should be referred to as 1/8-note Triplets counted with 1/16-note Triplet subdivisions, whereas "1 D T 2 D T," etc. should be referred to as 1/8-note Triplet counted with 1/8-note Triplet subdivisions. Either way, they basically sound like: "1 Da Da 2 Da Da."

- 5. All Tuplets can be counted using either 1 extra subdivision "D," 2 extra subdivisions "D T," 3 extra subdivisions "D T D," or groups of 2 in an alternating fashion: "D T, D T" (4), "D T, D T, D T" (6), or "D T, D T, D T, D T" (8) etc., or groups of 3 in an alternating fashion: "D T D, T D T" (6) or "D T D, T D T D" (9), etc. Having patterns to follow greatly helps with counting:
 - Odd-numbered Tuplets (3, 5, 7, 9, 11, etc.) will always line up only on some or all of the Metric counts (1, 2, 3, etc.) but none of the other Straight 1/16-note subdivisions "e & a." For example, a 1/16-note Septuplet (7 subdivisions where 4, Straight 1/16-notes "normally occur") on count "1" can simply be thought of as the count ("1") + an even number (6) of "DT" subdivisions, either as:

- 2 groups of 3 subdivisions: "1 **D T D T D T**," OR
- 3 groups of 2 subdivisions: "1 <u>DT DT DT</u>," which is easier to keep track of.
- Even-numbered Tuplets (2, 4, 6, 8, 10, etc.) will also line up on the Metric counts, but also occasionally on the 1/16-note subdivisions. For example, 1/16-note Triplets (Sextuplet):
 1 D T & D T and 1/16-note Twelves: 1 D T e D T & D T a D T.

Counting Duplets (Twos)

A Duplet is 2 evenly-spaced notes where 3 "normally occur," usually with a "2" over the bracketed note-grouping. A great way to figure out how to count Tuplets is to treat them as a polyrhythm. You can think of a Duplet as a 2:3 polyrhythm, i.e., 2 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Duplet) and 3 evenly-spaced notes for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 2) to create subdivisions of this note (e.g., using "Da"). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 3) and extending each played note (**bolded**) to this number of subdivisions.

In this example, what you end up with in the top rhythm of Step 2 is 2, **bolded** Duplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 3, 1/16-notes in the "normally occurring" bottom rhythm. This polyrhythm lines up only on count "1" and every 3, 1/16-notes. The same procedure was used for figuring 1/8-note, 1/4-note, and 1/2-note Duplets:

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|1DeD&DaD2DeD&DaD3DeD&DaD|1DeD&DaD2DeD&DaD3DeD&DaD|Step 2: Duplet 1/16-notes
|1DeD&DaD2DeD&DaD3DeD&DaD |1DeD&DaD2DeD&DaD3DeD&DaD |Step 1: 1/32-notes
| 1 e & a 2 e & a 3 e & a | 1 e & a 2 e & a 3 e & a | Straight 1/16-notes
|1 e & a 2 e & a 3 e & a |1 e & a 2 e & a 3 e & a |Step 2: Duplet 1/8-notes
                     3
                                      82
                                         a
                                           2 e &
                                                    a 3
                                                              a | Step 1: 1/16-notes
           2 e &
                   a
                        е
                          8
                              a
                                |1
                                   e
                                                         e &
           2
                      3
                                |1
                                            2
                                                      3
                                                                 |Straight 1/8-notes
|1
     &
                &
                           &
                                      &
                                                 &
                                                            &
1
           2
                      3
                                |1
                                            2
                                                      3
                                                            82
                                                                 | Step 2: Duplet 1/4-notes
     82
                &
                           8
                                      8
                                                 &
                                            2
1
     82
           2
                &
                      3
                           8
                                |1
                                      8
                                                 &
                                                      3
                                                            &
                                                                 |Step 1: 1/8-notes
           2
                      3
                                |1
                                            2
                                                      3
                                                                 |Straight 1/4-notes
|1
                                                                 |Step 2: Duplet 1/2-notes
1
           2
                      3
                                |1
                                                      3
                      3
|1
           2
                                |1
                                            2
                                                      3
                                                                 |Step 1: 1/4-notes
                                            2
1
                      3
                                                                 |Straight 1/2-notes
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Once you've created one Tuplet, you can either subdivide or collapse subdivisions to get the other Tuplet notes (**bolded**) and subdivisions (**greyed**). For example, starting with **Duplet 1/16-notes** (with one level of **subdivisions** to help count them), remove every other subdivision and then halve the number of the **bolded** notes (by **greying** them) to get the **Duplet 1/8-notes** (with **subdivisions** to help count them). The same process can be used to create Duplet 1/4-notes and 1/2-notes:

| 1 | 2 | 3 | | 1 | 2 | 3 | | Duplet 1/2-notes

Counting Triplets (Threes)

A Triplet is 3 evenly-spaced notes where 2 "normally occur," usually with a "3" over the bracketed notegrouping. You can think of this as a 3:2 polyrhythm, i.e., 3 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Triplet) and 2 evenly-spaced notes (e.g., Straight 1/16-notes: "1e" or "&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 3) to create subdivisions of this note (e.g., using a "DaTa" pair for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 2) and extending each played note (**bolded**) to this number of subdivisions. Refer also to the section on Sextuplets, which consists of two Triplets.

1. Counting 1/16-note Triplets:

Using the above procedure and example, what you end up with in the top rhythm of Step 2, is 3 **bolded** Triplet 1/16-notes (with their greyed subdivision extensions), counting in Triplet 1/32-note subdivisions, that fill the same time of 2, 1/16-notes in the "normally occurring" bottom rhythm. Notice that you say 2, Triplet 1/32-note subdivisions for each Triplet 1/16-note – just as in "Straight" Time a 1/16-note = 2, 1/32-notes. The simpler, *recommended counting with Triplet 1/16-note subdivisions is also included, changing "Da" to "Ta" (or vice versa) to keep the "DT" pairing for ease of counting. The top & bottom rhythms line up only on the 1/8-notes ("1 & 2 &," etc).

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| 1 D T & D T 2 D T & D T 3 D T & D T 4 D T & D T | *Triplet 1/16-notes | 1DTeDT&DTaDT2DTeDT&DTaDT3DTeDT&DTaDT4DTeDT&DTaDT | Step 2: Triplet 1/16-notes | 1DTeDT&DTaDT2DTeDT&DTaDT3DTeDT&DTaDT4DTeDT&DTaDT | Step 1: Triplet 1/32-notes | 1 e & a 2 e & a 3 e & a 4 e & a | Straight 1/16-notes
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2. Counting 1/8-note Triplets:

Others have tried various methods to count Triplet 1/8-notes: "Trip-a-let Trip-a-let" etc., "1-Trip-Let 2-Trip-Let" etc., "1 2 3 1 2 3" etc., "1 + a 2 + a" etc., "1 da da 2 da da" etc., "1 too too 2 too too" etc., or "1 e a 2 e a" etc. Following the same polyrhythm method as above, the *recommended counting below of: "1 Da Ta 2 Da Ta," etc. sounds practically the same as the popular "1 da da 2 da da" etc., though for more precision you can count with Triplet 1/16-note subdivisions (Step 2 greyed). Notice that you say 2, Triplet 1/16-note subdivisions for each Triplet 1/8-note – just as in "Straight" Time an 1/8-note = 2, 1/16-notes. What you end up with in the top two rhythms is 3 bolded Triplet 1/8-notes that fill the same time of 2, Straight 1/8-notes in the "normally occurring" bottom rhythm.

A simpler way to get the Triplet 1/8-notes is to collapse one level of subdivisions from Triplet 1/16-notes and halve the number of **bolded** notes.

| 1DTeDT&DTaDT2DTeDT&DTaDT3DTeDT&DTaDT4DTeDT&DTaDT | Triplet 1/16-notes | 1 D T 2 D T 3 D T 4 D T | *Triplet 1/8-notes

I've *recommended the above Triplet 1/8-note counting because:

- "1 Da Ta 2 Da Ta," etc. keeps track of the Metric count or "beat" (1, 2, 3, etc.) you are on and distinguishes the subdivisions from them. Whereas, counting Triplets as "1 2 3 1 2 3" etc. could be easily confused with counting the "beats" in 3/8 or 3/4 Meters. Also, counting Triplets as "Trip-a-let Trip-a-let" etc. doesn't keep track of the Metric counts in a bar, which is very helpful when counting. See the "CoreBeat System© Counting and Singing."
- "1 Da Ta 2 Da Ta," etc. spoken quickly as "1 Da Da 2 Da Da," is the easiest, fastest, and most familiar way many musicians have of saying these rhythms.
- "1 Da Ta 2 Da Ta," etc. doesn't conflict with the older, established counting of "Straight" 1/8 notes as "1 & 2 &", etc., since an 1/8-note Triplet "artificially" replaces this as a Tuplet. The 1/16-note Triplet "Da Ta" subdivisions also don't line up with "Straight" 1/16 notes "1 e & a 2 e & a", etc. so their delineations should also be unique and thus non-conflicting, as the *recommended counting insures.
- "1 Da Ta 2 Da Ta," etc. wins out over "1 & a 2 & a," etc. for several reasons: The middle 1/8-note Triplet note is 8/100 of a Metric count <u>later</u> than a Straight 1/16-note "e" subdivision, whereas a middle 1/8-note Triplet note would be 17/100 of a Metric count <u>earlier</u> than the Simple Offbeat "&" (and) count. Therefore, the middle 1/8-note Triplet note is physically closer to an "e" than an "&." Also, the middle 1/8-note Triplet note has that anticipation "Jerk-e is Funk-e" Feel that the corresponding Straight 1/16-note "e" subdivision has, making it closer in sound to an "e" than an "&." Finally, the "&" is the exact middle of a 1/16-note Sextuplet to separate the two 1/16-note Triplets, so this "&" should be preserved in the 1/16-note Sextuplet/Triplet counting and thus not be used in any 1/8-note Triplet counting method:
 - o 1 e & a 2 e & a, etc. Straight 1/16-note counting
 - o 1 D T 2 D T, etc. *recommended Triplet 1/8-note counting
 - o 1 D T & D T 2 D T & D T, etc. *recommended Triplet 1/16-note (Sextuplet) counting
- "1 Da Ta 2 Da Ta," etc. wins out over "1-Trip-Let 2-Trip-Let" etc. and "1 too too 2 too too" etc., because the third note of a Triplet is 8/100 of a Metric count earlier than a Straight 1/16-note "a" subdivision exactly the same difference as the proposed Da subdivision is from its corresponding Straight 1/16 "e" subdivision! So if anything the favorite Jazz and Latin counting of "1 da da 2 da da", etc. should be favored, which the *recommended counting emulates in sound (especially when Da Ta is spoken quickly) while making each subdivision relatively unique for reference sake (see #4 above). Also, the proposed counting of 1/8-note Triplet Shuffles as "1 Da Ta 2 Da Ta" etc., where Da is silent, spoken fast as "1 Da Da 2 Da Da," etc. is very close in sound to the Straight Dotted-1/8 + 1/16-note Shuffle "1 e & a 2 e & a, etc." both of which have a "Shuuuu-fle, Shuuuu-fle, Shuuuu-fle sound for that "Laz-a is Blues-a" Feel. You can also think of the Triplet 1/8-note "Ta" and 1/16-note "a" as a Setup or Pickup to the next Metric count that happens relatively quickly, making the sound of a sneeze: "haCheeeew, haCheeeew, haCheeeew," etc. Also, Jazz players commonly "Swing" out Straight

1/8-notes "1 & 2 &, etc." into the 1/8-note Triplet Shuffle "1 Da Ta 2 Da Ta" etc., such that the Simple Offbeat "&" now is played 17/100 of a Metric count later as the third Triplet 1/8-note "Ta" or 25/100 of a Metric count later as the 1/16-note "a" for a choppier Shuffle. For all these reasons, it make more sense to name the third Triplet 1/8-note "Ta" rather than "Let" or "too" as with other counting methods.

• Finally, "1 Da Ta 2 Da Ta," etc. wins out over "1 e a 2 e a" etc. even though this Triplet "e" is very close in distance (8/100 of a Metric count) and Feel ("Jerk-e is Funk-e") to a Straight 1/16-note "e" subdivision, and the Triplet "a" is very close in distance (8/100 of a Metric count) and Feel ("Laz-a is Blues-a") to a Straight 1/16-note "a" subdivision. Yes, close in distance and Time Feel, but still not the same, so Da Ta preserves this distinction. This is especially important in combining Straight and Swung rhythms and when referring to their unique subdivisions (see #4 above). We shouldn't refer to "apples" as "oranges" even if they are close to each other and close to the same color!

3. Counting 1/4-note and 1/2-note Triplets:

A simpler way to get these Triplets is to collapse one level of subdivisions, halve the number of **bolded** notes, and change the "Da" to "Ta" (or vice versa) to keep the "DT" pairing for ease of counting. These two Triplets are difficult to count, so I'd *recommend counting them with Triplet 1/8-note subdivisions.

1	D	T	2	D	T	3	D	T	4	D	T	Triplet 1/8-notes
1		D		T		3		D		T		Triplet 1/4-notes
1	D	T	2	D	T	3	D	T	4	D	\mathbf{T}	*Triplet 1/4-notes
1				D				${f T}$				Triplet 1/2-notes
1	D	T	2	\mathbf{D}	T	3	D	\mathbf{T}	4	D	T	*Triplet 1/2-notes

Counting Quadruplets (Fours)

A Quadruplet is 4 evenly-spaced notes where 5 "normally occur," usually with a "4" over the bracketed note-grouping. You can think of this as a 4:5 polyrhythm, i.e., 4 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Quadruplet) and 5 evenly-spaced notes (e.g., Straight 1/16-notes "1e&a2," etc.) for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 4) to create subdivisions of this note (e.g., using a "DaTaDa" grouping for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 5) and extending each played note (**bolded**) to this number of subdivisions.

1. Counting 1/16-note Quadruplets:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 4, **bolded** Quadruplet 1/16-notes (with their greyed subdivision extensions), counting in 1/64-note subdivisions, that fill the same time of 5, 1/16-notes in the "normally occurring" bottom rhythm. Notice that you say 4, 1/64-note subdivisions for each 1/16-note because a 1/16-note = 2, 1/32-notes or 4, 1/64-notes. Now there's a way to count these smaller subdivisions, and there isn't a simpler way to precisely *count a 1/16-note Quadruplet! The top & bottom rhythms line up only on the 6th Straight 1/16-note and it takes 5 Metric counts (not shown) to get them to line up back on count "1."

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| 1DTDeDTD&DTDaDTD2DTDeDTD&DTDaDTD3DTDeDTD&DTDaDTD | *Step 2: 1/16-note Quadruplets | 1DTDeDTD&DTDaDTD2DTDeDTD&DTDaDTD3DTDeDTD&DTDaDTD | Step 1: Straight 1/64-notes | 1 e & a 2 e & a 3 e & a | Straight 1/16-notes
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2. Counting 1/8-note, 1/4-note, and 1/2-note Quadruplets:

Using the same polyrhythm method as above, the *recommended counting of 1/8-note Quadruplets below with 1/32-note subdivisions is more precise and keeps track of the actual Metric counts better than any other counting system. Notice that you say 2, 1/32-note subdivisions for each 1/16-note. What you end up with in the top rhythm is 4, **bolded** Quadruplet 1/8-notes that fill the same time of 5, Straight 1/8-notes in the "normally occurring" bottom rhythm. Again, the top rhythm continues for 5 Metric counts (not shown) before the bottom rhythm lines back up on count "1."

A simpler way to get the 1/8-note, 1/4-note, and 1/2-note Quadruplets is to collapse one level of subdivisions and halve the number of **bolded** notes, changing "Da" to "Ta" (or vice versa) to keep the "DT" pairing:

Counting Quintuplets (Fives)

A Quintuplet is 5 evenly-spaced notes where 4 "normally occur," usually with a "5" over the bracketed note-grouping. You can think of this as a 5:4 polyrhythm, i.e., 5 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Quintuplet) and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 5) to create subdivisions of this note (e.g., e.g., using 2 pairs of "DaTa" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions.

1. Counting 1/16-note Quintuplets:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 5, **bolded** Quintuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 4, 1/16-notes in the "normally occurring" bottom rhythm. The *recommended counting is simple to remember – 5, Quintuplet 1/16-note subdivisions per Metric count, changing the "Da" to "Ta" (or vice versa) from the Step 2 version to keep the "DT" pairing for ease of counting. However, for more precision at slower tempos, try the Step 2 version because these subdivisions account for the Straight 1/16-note subdivisions. The top & bottom rhythms line up on every Metric count.

```
| 1 D T D T | *1/16-note Quintuplet | 1DTDTeDTDT&DTDTaDTDT | Step 2: 1/16-note Quintuplet | 1DTDTeDTDT&DTDTaDTDT | Step 1: 5 subdivisions per 1/16-note | 1 e & a | Straight 1/16-notes
```

2. Counting 1/8-note, 1/4-note, and 1/2-note Quintuplets:

A simpler way than the polyrhythm method to get these Quintuplets is to collapse one level of subdivisions, halve the number of **bolded** notes, and if applicable, change the "Da" to "Ta" (or vice versa) to keep the "DT" pairing for ease of counting. *1/2-note Quintuplets are more precisely counted with Quintuplet 1/8-note subdivisions (common to counting 1/4-note Quintuplets):

1	D 7	D	T	82	D	T	D	\mathbb{T}	2	D	T	D	T	82	D	T	D	T	1/8-note Quintuplet
1	1)	T		D		T		2		D		T		D		T		1/4-note Quintuplet
1			D				\mathbf{T}				D				T				1/2-note Quintuplet
1	1		T		D		\mathbb{T}		2		D		T		D		T		*1/2-note Quintuplet

Counting Sextuplets (Sixes)

A Sextuplet is 6 evenly-spaced notes where 4 "normally occur," usually with a "6" over the bracketed note-grouping. You can think of this as a 6:4 polyrhythm, i.e., 6 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Sextuplet) and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 6) to create subdivisions of this note (e.g., e.g., using alternating "Da" and "Ta" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions. Sometimes they are notated as 2 groups of 3 (as a 3:2 polyrhythm) – see also the section on Triplets.

1. Counting 1/16-note Sextuplets:

Refer to "Counting 1/16-note Triplets" to derive the *recommended counting, which is simple to remember – 6, Sextuplet 1/16-note subdivisions per Metric count, changing the "Da" to "Ta" (or vice versa) from the Step 2 version to keep the "DT" pairing for ease of counting. However, for more precision at slower tempos, try the Step 2 version because these subdivisions account for the Straight 1/16-note subdivisions. Also, notice that 6:4 can be reduced down to 3:2, which is exactly what a Triplet is. For example, a 1/16-note Sextuplet is really 2, 1/16-note Triplets.

1	\mathbf{D}	T	&	D	T	*1/16-note Sextuplet
1DT	DTDe	DTD	TD&D	Г DT Dа	DTI	OTD Step 2: 1/16-note Sextuplet
1DT	DTD	DTD	TD&D	ГОТОа	DTI	OTD Step 1: 6 subdivisions per 1/16-note
1	•	2	&	a	ι	Straight 1/16-notes

The *recommended counting above of 1/16-note Sextuplets/Triplets also fits well with the idea of "Swinging" out Straight 1/16-notes "1 e & a 2 e & a," etc. into the 1/16-note Shuffle: "1 D T & D T 2 D T & D T," etc., where the Straight 1/16-note subdivisions "e" and "a" are "Swung" out 8/100 of a Metric count later to "Ta," whereas the Metric counts and Simple Offbeat "&" stay put. Saying this fast will sound like the

way Blues and R & B players say it: "1___Da And___Da 2___Da And___Da," etc. The rhythm of a 1/16-note Shuffle is like Straight 1/16-notes but with that "Shuuuu-fle, Shuuuu-fle, Shuuuu-fle" sound, where the first "Ta" acts as a Setup to the "&" and the second "Ta" as a Setup to the next Metric count and both happen relatively quickly, making the sound of a sneeze: "haCheeeew, haCheeeew, haCheeeew."

2. Counting 1/8-note, 1/4-note, and 1/2-note Sextuplets:

These were derived using the polyrhythm method reduced from 6:4 to 3:2 (see the section on Triplets) or the simpler method of collapsing one level of subdivisions, halving the number of **bolded** notes, and if applicable, changing the "Da" to "Ta" (or vice versa) to keep the "DT" pairing for ease of counting. *Recommended counting is also included, noting that 1/4 and 1/2-note Sextuplets/Triplets require Sextuplet 1/8-note subdivisions to better count them.

Counting Septuplets (Sevens)

A Septuplet is 7 evenly-spaced notes where 4 "normally occur," usually with a "7" over the bracketed note-grouping. You can think of this as a 7:4 polyrhythm, i.e., 7 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Septuplet) and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 7) to create subdivisions of this note (e.g., using 3 pairs of "DaTa" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions.

1. Counting 1/16-note Septuplets:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 7, **bolded** Septuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 4, 1/16-notes in the "normally occurring" bottom rhythm. The *recommended counting is simple to remember – 7, Septuplet 1/16-note subdivisions per Metric count, changing the "Da" to "Ta" (or vice versa) from the Step 2 version to keep the "DT" pairing for ease of counting. However, for more precision at slower tempos, try the Step 2 version because these subdivisions account for the Straight 1/16-note subdivisions. The top & bottom rhythms line up on every Metric count.

2. Counting 1/8-note, 1/4-note, and 1/2-note Septuplets:

A simpler way to get these Septuplets is to collapse one level of subdivisions and halve the number of **bolded** notes, changing "Da" to "Ta" (or vice versa) to keep the "DT" pairing for ease of counting. Here, you can see the 7 subdivisions of each note in the top rhythm, except the *1/2-note Septuplets kept the subdivisions of the 1/4-note Septuplets to better see the Metric count.

Counting Octuplets (Eights)

An Octuplet is 8 evenly-spaced notes where 6 "normally occur," usually with an "8" over the bracketed note-grouping. You can think of this as an 8:6 polyrhythm, but this can be reduced down to a 4:3 polyrhythm to make it simpler to notate as 4 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Octuplet) and 3 evenly-spaced notes (e.g., 1/16-notes: "1e&", "a2e", etc.) for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 4) to create subdivisions of this note (e.g., using a "DaTaDa" group for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions.

1. Counting 1/16-note Octuplets:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 4, **bolded** Octuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 3, Straight 1/16-notes in the "normally occurring" bottom rhythm. The *recommended counting precisely keeps track of the 1/16 notes. The top & bottom rhythms line up every 3, 1/16-notes:

```
| 1DTDeDTD&DTDaDTD2DTDeDTD | *Step 2: Octuplet 1/16-notes | 1DTDeDTD&DTDaDTD2DTDeDTD | Step 1: Straight 1/64-notes | 1 e & a 2 e | Straight 1/16-notes
```

2. Counting 1/8-note, 1/4-note, and 1/2-note Octuplets:

A simpler way than the polyrhythm method to get these Octuplets is to collapse one level of subdivisions, halve the number of **bolded** notes, and change the "Ta" to "Da" since there is only one level of further subdivision in the 1/32-note subdivisions of Octuplet 1/8-notes. *The subdivisions of the Octuplet 1/4-notes were <u>not</u> "halved" to create the Octuplet 1/2-notes in order to preserve the Straight 1/16-notes for better counting.

Counting Nines (Nontuplets)

A "Nine" Tuplet is 9 evenly-spaced notes where 4 "normally occur," usually with a "9" over the bracketed note-grouping. You can think of this as a 9:4 polyrhythm, i.e., 9 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Nine) and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 9) to create subdivisions of this note (e.g., e.g., using 4 pairs of "DaTa" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions.

1. Counting 1/16-note Nines:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 9, **bolded** "Nine" Tuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 4, 1/16-notes in the "normally occurring" bottom rhythm. The precise counting of Step 2 helps you relate this to Straight 1/16-notes, but the simpler, *recommended counting helps you better see the 4 "DT" pairs. The top & bottom rhythms line up on every Metric count.

1	D	T	D T	D	T	D	T	*1/16-note Nines
1DTI	TDTD	TeD7	DTDTD	Г&D Т DТ	'D T D'	ľa D TD	TDTDT	Step 2: 1/16-note Nines
1DTI	OTDTD	TeD7	'DTDTD'	Γ&DTDT	'DTD'	l'aDTD	TDTDT	Step 1: 9 subdivisions per 1/16-note
1		e		&		a		Straight 1/16-notes

2. Counting 1/8-note, 1/4-note, and 1/2-note Nines:

A simpler way than the polyrhythm method to get these Nines is to keep "halving" the number of **bolded** notes of the *recommended 1/16-note Nine counting. This also helps you keep track of the Metric count:

Counting Tens (Decuplets)

A "Ten" Tuplet is 10 evenly-spaced notes where 4 "normally occur," usually with a "10" over the bracketed note-grouping. You can think of this as a 10:4 polyrhythm, i.e., 10 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note Ten) and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 10) to create subdivisions of this note (e.g., using 2 pairs of "DaTa" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are simply counted (**greyed**) by taking the bottom/2nd number of the polyrhythm ratio (e.g., 4) and extending each played note (**bolded**) to this number of subdivisions. It's also often seen as 2 groups of 5, so the polyrhythm can be reduced to 5:2.

1. Counting 1/16-note Tens:

Using the polyrhythm 5:2 method, what you end up with in the top rhythm of Step 2 is 5, **bolded** "Ten" Tuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 2, 1/16-notes in the "normally occurring" bottom rhythm. The *recommended counting is simple to remember – 5, 1/16-note "Ten" Tuplet subdivisions per Straight 1/8-note (or 10 per 1/4-note), changing the "Da" to "Ta" (or vice versa) from the Step 2 version to keep the "DT" pairing for ease of counting. However, for more precision at slower tempos, try the Step 2 version because these subdivisions also account for the Straight 1/16-note subdivisions. The top & bottom rhythms line up on every Metric count 1/8-note.

```
| 1 D T D T & D T D T 2 D T D T & D T D T |*1/16-note Tens

| 1DTDTeDTDT&DTDTaDTDT2DTDTeDTDT&DTDTADTDT|Step 2: 1/16-note Tens

| 1DTDTeDTDT&DTDTaDTDT2DTDTEDTDT&DTDTADTDT|Step 1: 5 subdivisions

| 1 e & a 2 e & a |Straight 1/16-notes
```

2. Counting 1/8-note, 1/4-note, and 1/2-note Tens:

A simpler way than the polyrhythm method to get these "Tens" is simply halve the number of **bolded** notes, and change the "Ta" to "Da" (or vice versa) to preserve the "DT" pairing for ease of counting. The subdivisions of the 1/4-note and 1/2-note Tens are kept the same as the 1/8-note Tens to help better keep track of the Metric count.

```
| 1DTDT&DTDT2DTDT&DTDT3DTDT&DTDT4DTDT&DTDT| *1/16-note Tens
                     D
                         T
                                   3
                                       D
                                          T
                                              D
                                                        D
                                                                      1/8-note Tens
                            D
                                Т
                  2
                                   3
                                          T
                                                 \mathbf{T}
                                                                     | 1/4-note Tens
| 1
       T
           D
              T
                     D
                            D
                                T
                                       D
                                              \mathbb{D}
                                                        \mathbf{D}
                                                           T
                                                               D
                                   3 D T
                            D
                               T
                                             D T
                                                    4
                                                        \mathbf{D}
                                                           T
                                                               D T
                                                                     | 1/2-note Tens
```

Counting Elevens (Undecuplets, Hendecuples)

An "Eleven" Tuplet is 11 evenly-spaced notes where 4 "normally occur," usually with a "11" over the bracketed note-grouping. You can think of this as a 11:4 polyrhythm, i.e., 11 evenly-spaced notes for the desired top rhythm (e.g., a 1/16-note "Eleven") and 4 evenly-spaced notes (e.g., 1/16-notes: "1e&a") for the "normally occurring" bottom rhythm. Step 1 involves subdividing the desired notes of the bottom rhythm (e.g., 1/16-notes) by the top number of the polyrhythm ratio (e.g., 11) to create subdivisions of this note (e.g., using 5 pairs of "DaTa" for ease of counting). Step 2 determines which of these are played (**bolded**) and which are

simply counted (greyed) by taking the bottom/ 2^{nd} number of the polyrhythm ratio (e.g., 4) and extending each played note (bolded) to this number of subdivisions.

1. Counting 1/16-note Elevens:

Using the polyrhythm method, what you end up with in the top rhythm of Step 2 is 11, **bolded** "Eleven" Tuplet 1/16-notes (with their **greyed** subdivision extensions) that fill the same time of 4, 1/16-notes in the "normally occurring" bottom rhythm. The *recommended counting is simple to remember – 11, 1/16-note "Eleven" Tuplet subdivisions per Metric count, changing the "Da" to "Ta" (or vice versa) from the Step 2 version to keep the "DT" pairing for ease of counting. However, for more precision at slower tempos, try the Step 2 version because these subdivisions account for the Straight 1/16-note subdivisions. The top & bottom rhythms line up on every Metric count.

1	D	T	D	T	D	D	T	D	T	D	*1/16-note Elevens
1DT	DTDT	'D T D'	Ге D Т	DT D TI	OTDT8	DTD	rd T d1	'D T aD	TDTI	TDTI	T Step 2: 1/16-note Elevens
1DT	DTDT	'DTD'	Te D T	DTDTI	TDT8	DTD'	l'DTD1	DTaD	TDTI	TDTI	T Step 1: 11 subdivisions
1			e		8	č		a			Straight 1/16-notes

2. Counting 1/8-note, 1/4-note, and 1/2-note Elevens:

A simpler way than the polyrhythm method to get these "Elevens" is to collapse one level of subdivisions, halve the number of **bolded** notes, and change the "Ta" to "Da" (or vice versa) to preserve the "DT" pairing for ease of counting. The subdivisions of the 1/4-note and 1/2-note Elevens are kept the same as the 1/8-note Elevens to help keep track of at least some of the Metric counts.