

whole tone scale triads

on G.

start with a normal whole tone scale. ours is G A B C# D# F G.

the first note is G. build all the possible triads containing G.

GBD
EGB
CEG

add the accidentals from our scale. cross out the triads with letters not in the scale, and those that aren't Augmented.

G all notes exist in scale ✓
triad is Augmented ✓

G A B C# D# F G

triad ✓
Augmented ✓

now we have one of our two triads: GBD#.

find the letter names that don't have a triad yet. for this example, that's A, C#, *F.

arrange those letters until you get an Aug. triad. # G

tips and tricks:

- triads will always go ABABAB(A)
- positions will be paired ($\frac{5}{3}$ $\frac{5}{3}$ $\frac{6}{3}$ $\frac{6}{3}$, etc.)
- this works whether you use sharps or flats in your scale.

PRACTICAL SOLUTIONS ↑

↓ HOW THIS WORKS (MATH)

if you assign numbers to all of the keys on a piano, you can do most of this with simple(ish) math. all we really need is one octave's worth of numbering.

so now we have an octave numbered 1 to 12. between each one is a half step.

since it's a whole tone scale, we're going to be using every other number (whole steps).

so we can take our numbered list and remove every other number.

1 X 3 X 5 X 7 X 9 X 11 X. this is our whole tone scale expressed as numbers: 1, 3, 5, 7, 9, 11.

WHOLE STEP (between 1 and 3)
TWO WHOLE STEPS (between 3 and 5)

starting with any number, you can count out a triad of notes with two whole steps between them (an Augmented triad). if you reach the end, you can loop around (like "base" math).

1 X 3 X 5 X 7 X 9 X 11 X 1 X 3 X 5 X 7 X 9 X 11 X

ex. 1 ex. 2

now, if you've already found one triad here, the other is all the remaining numbers.

1 X 3 X 5 X 7 X 9 X 11 X triad 1: 1, 5, 7 ; triad 2: 3, 7, 11.

this number substitution explains why there have to be two distinct, separate triads for us to find. but what about permutations?

in one set/triad, we have 1, 5, and 9. we can make three triads: 1 5 9, 5 9 1, or 9 1 5.

same with the other triad: 3, 7, 11. our possible permutations are: 3 7 11, 7 11 3, 11 3 7.

which of the permutations is correct for any given example depends on whether you use sharps or flats (and, consequently, which note you "skip"). the good news is you have only three options for each of the two triads, and elimination by note name or triad quality should give you the correct answer.

why an Augmented triad? because in a whole tone scale, we've eliminated all of the half-steps. all we have left is whole steps. a major, minor, or diminished triad all need at least one minor 3rd. since you can't build a minor third out of whole steps, but you can build a Major 3rd, the only triad option we have left is an Augmented triad.