

# POLYRHYTHM FUNDAMENTALS

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**POLYRHYTHMS** - simultaneous combination of two or more contrasting rhythms  
ex: 2 against 3 (2x3), 3x4, 4x5, 3x5, etc.

## 3 TYPES OF POLYRHYTHMS

- Factor Polyrythms
- Easy Polyrythms
- Complex Polyrythms
- Fractured Polyrythms

**FACTOR POLYRHYTHMS** - two rhythms at the same time, where one rhythm is completely embodied by the other rhythm.

- **Factor** = having one number being a multiple of another

4x2 - 4 is easily divided by 2 = each beat of the 2-let is felt on every other beat of a 4-let;  $4/2 = 2$

6x2 - 6 is easily divided by 2 = each beat of the 2-let are felt on every third beat of a 6-let;  $6/2 = 3$

21x3 - 21 is easily divided by 3 = each beat of the 3-let are felt on every seventh beat of a 6-let;  $21/3 = 7$

**EASY POLYRHYTHMS** = GFC of 12 or less

### **3x2** (Ex: 1)

1. Find the Greatest Common Factor (GCF) of the two rhythms:

- 2 multiplied by 3 = 6
- Visualization [ - - - - - ] = 6-let (Ex: 2)

2. Find each individual rhythm's placement:

- 2-let;  $6/2 = 3$  (every third beats is a part of the 2-let); [ L - - L - - ] (Ex: 3)
- 3-let;  $6/3 = 2$  (every second beat is a part of the 3-let); [ R - R - R - ] (Ex: 4)

3. Map the two rhythms on top of each other to create the *composite rhythm*:

- [ b - r l r - ]; b = both (Ex: 5)

4. Base one rhythm on the other's subdivisions:

- 3-let based; [ 1 2 3 1 2 3 ] = [ **b** 2 R , 1 R 3 ] (Ex: 6)
- 2-let based; [ 1 2 1 2 1 2 ] = [ **b** 2 , 1 L , 1 2 ] (Ex: 7)

### **4x3**

1. GCF = 12

2. Rhythmic Placement

- 4-let;  $12/4 = 3$ ; **every third beat** = L
- 3-let;  $12/3 = 4$ ; **every fourth beat** = R

3. Composite Rhythm = [ b - - L R - L - R L - - ]

4. Based

- 4-let based = [ **b** 2 3 R , 1 2 R 4 , 1 R 3 4 ]
- 3-let based = [ **b** 2 3 , 1 L 3 , 1 2 L , 1 2 3 ]

Practicing Polyrythms (using 3x2)

1. Get two surfaces with different timbres; ex: desk w/ palm and wrist, tom and cymbal, etc.
2. Using a metronome, practice the two rhythms together on two surfaces to hear the “melody” of the composite rhythm (“Carol of the Bells” introduction)
3. Practice both rhythms on the same surface to hear the placement of each note  
- focus on the placement AND the double stops that occur
4. Practice the composite rhythm with one hand on a regular surface, and then the other hand on a soft, silent surface (leg, drum pad, etc.).
5. Play one rhythm on the audible surface to feel the “flow” of the rhythm.
6. Then, add the other rhythm on the silent surface. The “flow”/feeling/sound of the audible rhythm shouldn’t change.
7. Then, switch the hands and practice the rhythms where the surfaces are reversed.
8. Next, practice the rhythms on the opposite hand using the same process.
9. Finally, put the composite rhythm back together on the desired surfaces.

*\* You can also get two people, each playing one of the two rhythms of the polyrhythm, and have them perform their respective rhythm with a metronome. Thus, giving an audible example of the polyrhythm.*

**COMPLEX POLYRHYTHMS** = GFC greater than 12

**5x3** (Ex: 8)

1. GFC = 15 (Ex: 9)
2. Rhythmic Placement
  - 5-let;  $15/5 = 3$ ; **every third beat** = L (Ex: 10)
  - 3-let;  $15/3 = 5$ ; **every fifth beat** = R (Ex: 11)
3. Composite Rhythm = [ b - - R - L R - - R L - R - - ] (Ex: 12)
4. Based
  - 5-let = [ **b** 2 3 L 5 , 1 L 3 4 L , 1 2 L 4 5 ] (Ex: 13)
  - 3-let = [ **b** 2 3 , 1 2 R , 1 2 3 , 1 R 3 , 1 2 3 ] (Ex: 14)

**FRACTURE POLYRHYTHMS** = Leaving out one or more notes from either/both rhythms of a polyrhythm

**5x4, missing the 3rd partial (note) of the 5-let** (Ex: 17)

1. GFC = 20
2. Rhythmic Placement
  - 5-let;  $20/5 = 4$ ; **every fourth beat** = L
  - 4-let;  $20/4 = 5$ ; **every fifth beat** = R
3. Composite Rhythm = [ b - - - L R - - (L) - R - L - - R L - - - ] (Ex: 18)
4. Based
  - 5-let = [ **b** 2 3 4 L , 1 2 3 (L) 5 , 1 2 L 4 5 , 1 L 3 4 5 ] (Ex: 19)
  - 4-let = [ **b** 2 3 4 , 1 R 3 4 , (1) 2 R 4 , 1 2 3 R , 1 2 3 4 ] (Ex: 20)

Ex: 1

Ex: 2

Ex: 3

Ex: 4

Ex: 5

Ex: 6

Ex: 7

3  
5

Ex: 8

15

Ex: 9

15

1 6 11

Ex: 10

15

1 4 7 10 13

Ex: 11

15

1 4 6 7 10 11 13

Ex: 12

15

1 4 12 5 1 3

Ex: 13

15

1 1 3 1 1 2 1

Ex: 14

Ex: 17

Ex: 18

Ex: 19

Ex: 20