

## Chord Progression:

Just Intonation.

C	D	E	F	G	A	B	C	major (3 notes)
1	$\frac{5}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{15}{8}$	2	triad

$$\begin{array}{ll} \text{I} & 1 \cdot \frac{5}{4} \cdot \frac{3}{2} \\ \text{IV} & \frac{3}{2} \cdot \frac{15}{8} \cdot \frac{18}{7} \end{array} \quad \begin{array}{lll} \text{C} & \text{E} & \text{G} \\ \text{G} & \text{B} & \text{D} \end{array} \quad \begin{array}{l} \text{In thirds,} \\ \frac{5}{4}, \frac{3}{2}, \frac{5}{3} = \frac{6}{5} \end{array}$$

minor triad: intervals $\frac{6}{5}$ , $\frac{5}{4}$	{	I	IV	vi	IV
; I $\frac{6}{5}$ $\frac{6}{5} \cdot \frac{5}{4}$		I	vi	ii	IV
C "E <sup>b</sup> " G	{	I	C	E	G
vi $\frac{5}{3}$ $\frac{5}{3} \cdot \frac{6}{5}$ $\frac{5}{4}$		vi	A	C	E
A C E		ii	"D"	F	A.
$\lambda = \frac{5}{3}$		IV	"C"	"B"	"D" <sup>b</sup>
$\frac{5}{3}/\alpha = \frac{5}{4}$			<del><math>\frac{5}{4}</math></del>	<del><math>\frac{6}{5}</math></del>	$\frac{6}{5}/\alpha$

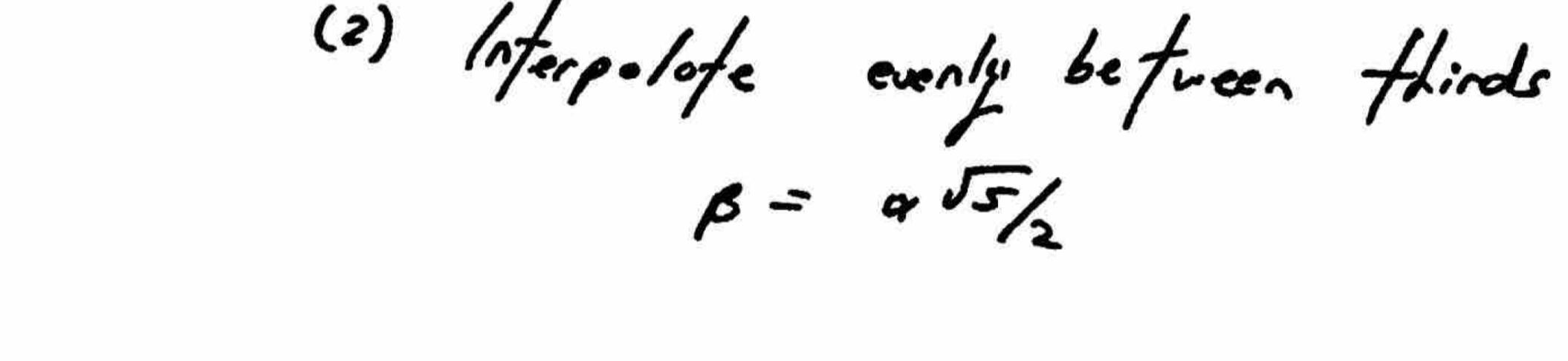
$$x = \frac{5}{3} \cdot \frac{4}{5} \cdot \frac{4}{3}$$

~~$x = \frac{4}{3} \cdot \frac{4}{5} \cdot \frac{4}{3} = \frac{6}{5}$~~

$$x = \frac{4}{3} \cdot \frac{5}{6} = \frac{20}{18} \cdot \frac{10}{9}.$$

Meantone Scale:

unTakem

Adjustments to fifth ( $\frac{3}{2}$ ) to improve (major) thirds(1) thirds are  $\frac{5}{4}$ 

(2) interpolate evenly between thirds

$$\beta = \alpha \sqrt[3]{2}$$

$$\left(\frac{\sqrt{5}}{2}\right)^s s^2 = 1 \quad s = \frac{2^3}{5^{3/4}}$$

This leads to:

$$\begin{array}{llllllll} \text{C} & \text{D} & \text{E} & \text{F} & \text{G} & \text{A} & \text{B} & \text{C} \\ 1 & \frac{\sqrt{5}}{2} & \frac{5}{4} & \frac{2}{3} & \frac{5}{4} & \frac{5}{3} & \frac{5}{4} & \frac{5}{4} \end{array}$$

$$5^{1/4} = 1.495 \approx \frac{5}{4}$$

- chord prog. better.

$$- (3^{1/4})^4 = 5$$

$$- ((\frac{5}{4}) \cdot 2 \cdot 2) = 5.$$

$$(\frac{5}{4})^3 = \frac{125}{64} \approx 2$$

~ circle of fifths