

F12FTDISC1S

Graph of cosine functions depending on $i = 1, 2, 3, \dots$ and frequencies $1/128, 2/128$ and so on to $130/128$. Look for the repetition.

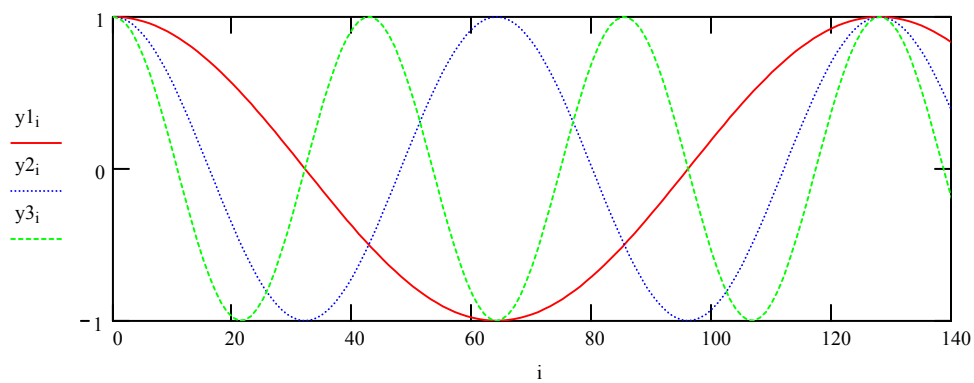
Length interval is $i = 1, 2, 3, \dots$

$i := 0..140$

1. Frequencies

$f = 1/128, 2/128, 3/128$

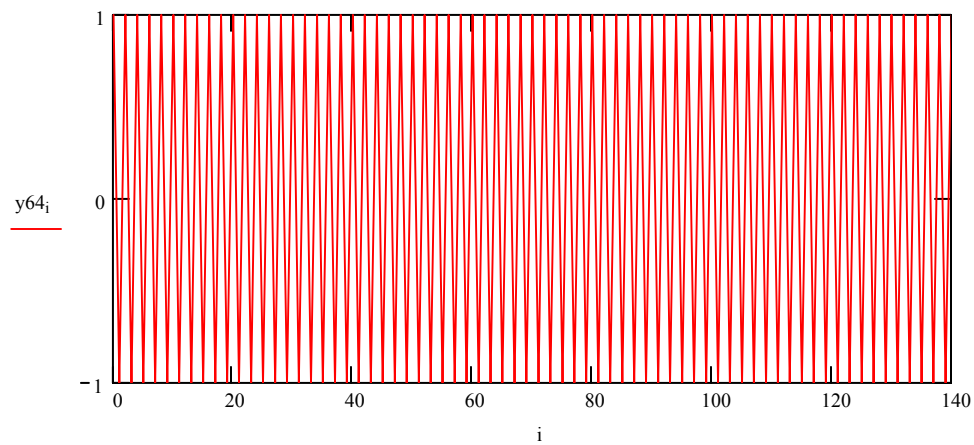
$$y1_i := \cos\left(2\pi \cdot \frac{1}{128} \cdot i\right) \quad y2_i := \cos\left(2\pi \cdot \frac{2}{128} \cdot i\right) \quad y3_i := \cos\left(2\pi \cdot \frac{3}{128} \cdot i\right)$$



2. Frequency

$64/128$

$$y64_i := \cos\left(2\pi \cdot \frac{64}{128} \cdot i\right)$$



3. Frequencies

127/128, 128/128, 129/128, 130/128

$$y_{127_i} := \cos\left(2 \cdot \pi \cdot \frac{127}{128} \cdot i\right)$$

$$y_{128_i} := \cos\left(2 \cdot \pi \cdot \frac{128}{128} \cdot i\right) \quad \text{will not show up on the graph}$$

$$y_{129_i} := \cos\left(2 \cdot \pi \cdot \frac{129}{128} \cdot i\right) \quad \text{same as } 127/128 \text{ and } 1/128$$

$$y_{130_i} := \cos\left(2 \cdot \pi \cdot \frac{130}{128} \cdot i\right) \quad \text{same as } 2/128$$

