

pi 3.1415

Compunerea Oscilațiilor Paralele de Perioade/Pulsatii puțin Diferite (fen. Batailor)

Stop

Y(X)
X(t)
Y(t)
Y=x+y

XY Graph

Alegeti valori pentru :

a)-Amplitudini (5-20)cm

A1x (cm)

10

A2y (cm)

20

b)-Perioade T= (2-2.5)s, v-frecvente, w-pulsatii

T 1 (s) v1=1/T1,Hz

2.3502 0.42549

T 2 (s) v2=1/T2,Hz

2.09 0.47846

w1=2pi/T1

2.67347 rad/s

w2=2pi/T2

3.00631 rad/s

c)-Faze initiale (-180+180)grd

f01(grd)

30

f02(grd)

90

Urmarii :

Dfo-diferenta de faza si Raportul frecventelor;
To-perioada oscilatiilor; Tb-perioada batailor

Dif. Faza (rad)

Dfo = -1.0472 x Pi

To = $\frac{2T_1 \cdot T_2}{T_1 + T_2}$ 2.2124 (s)

vo = 1/To 0.4519 (Hz)

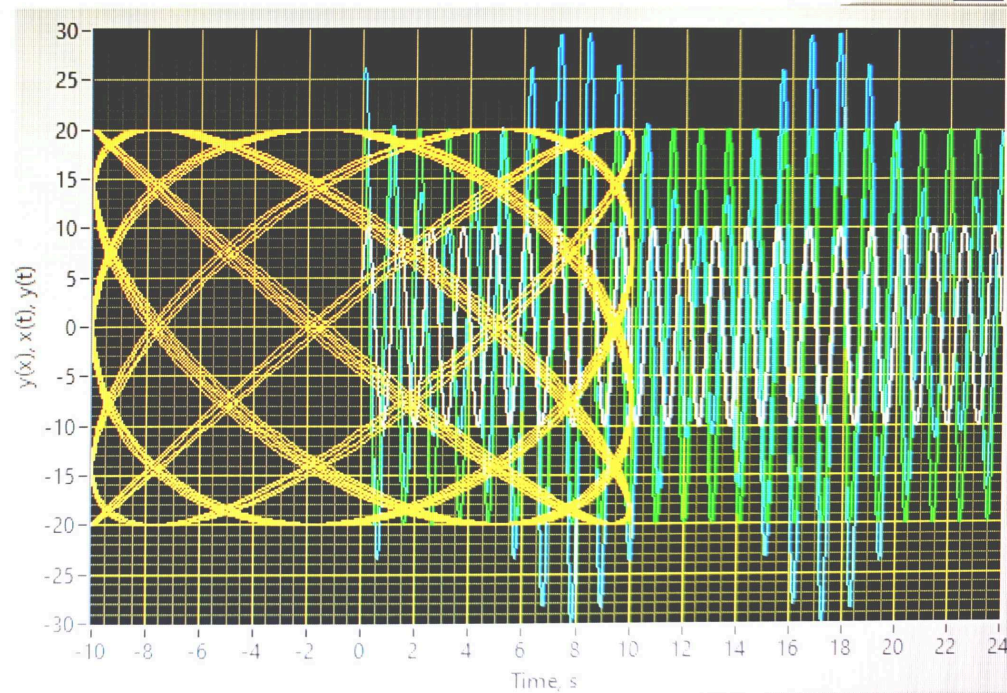
Raport, v2/v1=T1/T2

v2/v1= 1.1245

Tb = $\frac{T_1 \cdot T_2}{T_1 - T_2}$ 18.8775 (s)

vb = 1/Tb 0.05297 (Hz)

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Compunerea Oscilatiilor Paralele de Perioade/Pulsatii putin Diferite (fen. Batailor)

Alegeti valori pentru :

a)-Amplitudini (5-20)cm

A1x (cm) 10 A2y (cm) 20

b)-Perioade T= (2-2.5)s, v-frecvente, w-pulsatii

T1 (s) 2.3502 v1=1/T1,Hz 0.42549 T2 (s) 2.094 v2=1/T2,Hz 0.47755
w1=2pi/T1 2.67347 rad/s w2=2pi/T2 3.00057 rad/s

c)-Faze initiale (-180+180)grd

f01(grd) 30 f02(grd) 90

Urmarii:

Dfo-diferenta de faza si Raportul frecventelor;
To-perioada oscilatiilor; Tb-perioada batailor

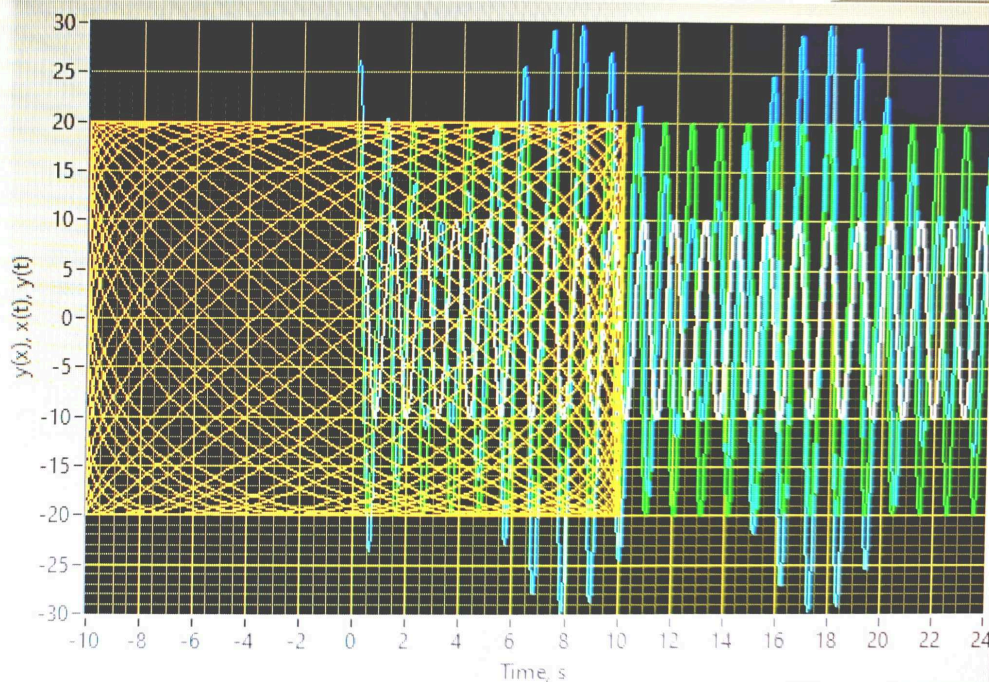
Dif. faza (rad) $To = \frac{2T_1 \cdot T_2}{T_1 - T_2} 2.2147 (s)$
Dfo = -1.0472 x Pi $vo = 1/To 0.4515 (Hz)$
Raport, v2/v1=T1/T2 $Tb = \frac{T_1 \cdot T_2}{T_1 - T_2} 19.2089 (s)$
v2/v1= 1.12235 $vb = 1/Tb 0.05205 (Hz)$

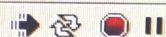
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Stop

XY Graph

Y(X) X(t) Y(t) Y=x+y





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Compunerea Oscilațiilor Perpendiculare de Amplitudini și Frecvențe/Pulsatii Diferite (fig. Lisajoux)

Alegeti valorile :

Amplitudinilor (5-20)cm

A 1 (cm)

A 2 (cm)

Perioadelor (0.5-2) s

T 1 (s)

$v1=1/T1$

T 2 (s)

$v2=1/T2$

Fazelor initiale (0.2-2)rad

f 01(rad)

f 02 (rad)

Urmarii :



STOP

Diferenta de Faza si Raportul Frecventelor

Raport Frecvente, $v2/v1=T1/T2$

Dif. Faza (rad)

$v2$ 0.2

1 x Pi $v2/v1 = \frac{0.2}{2} = 0.1$

$v1$ 2

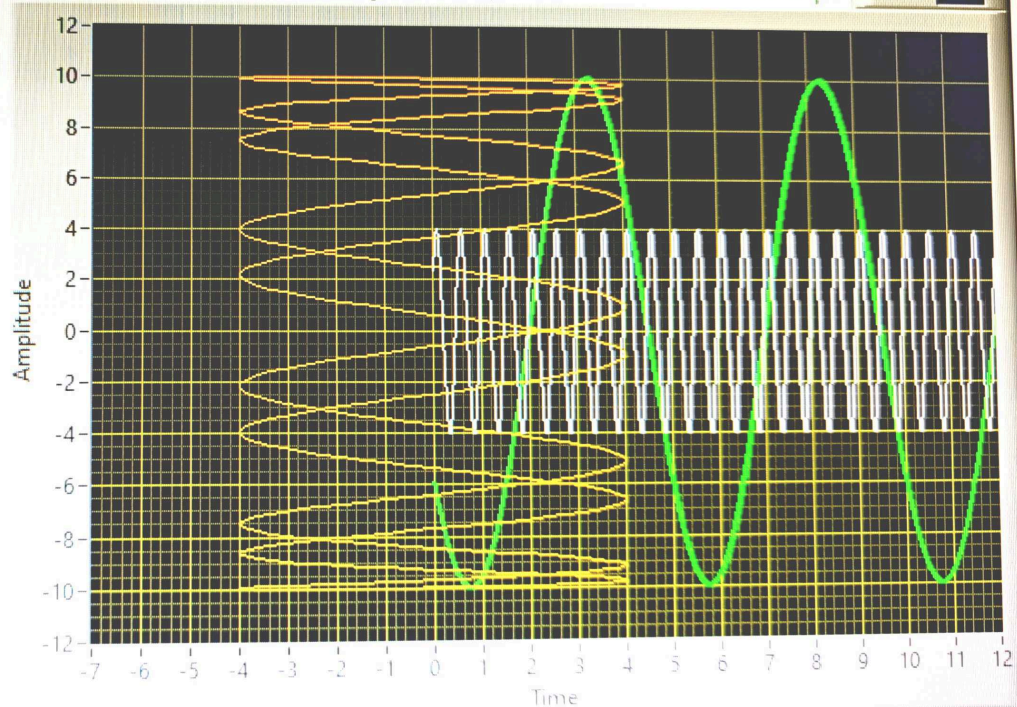
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XY Graph

Y(X)

X(t)

Y(t)



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