

Ex. nov. 2019

P.20

$$x[n] = \{1, -1, 3, 5\}$$

$$y[n] = \{4, 2, 0, -2, -4\}$$

calculer la convolution circulaire en $N=7$.

	1	-1	3	5	0	0	0	
$n=0$	4	0	0	-4	-2	0	2	$\rightarrow 4-20=-16$
$n=1$	2	4	0	0	-4	-2	0	$\rightarrow 2-4=-2$
$n=2$	0	2	4	0	0	-4	-2	$\rightarrow -2+12=10$
$n=3$	-2	0	2	4	0	0	-4	$\rightarrow -2+6+20=24$
$n=4$	-4	-2	0	2	4	0	0	$\rightarrow -4+2+10=8$
$n=5$	0	-4	-2	0	2	4	0	$\rightarrow 4-6=-2$
$n=6$	0	0	-4	-2	0	2	4	$\rightarrow -12-10=-22$

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$$x[n] \otimes y[n] = \left\{ \underline{-16}, 2, 10, 24, 8, -2, -22 \right\}$$

\uparrow
 $N=7$

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