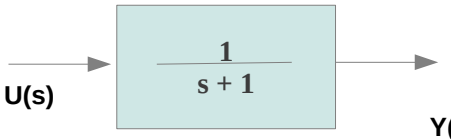
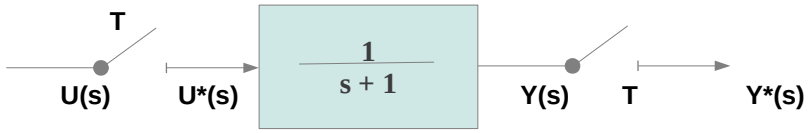
contoh perbandingan antara isyarat tercuplik dan isyarat kontinyu

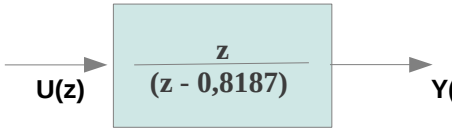
k	t	y(t)	y(k)
0,0000	0,0000	0,0000	1,0000
1,0000	0,2000	0,1813	1,8187
2,0000	0,4000	0,3297	2,4890
3,0000	0,6000	0,4512	3,5590
4,0000	0,8000	0,5507	4,4350
5,0000	1,0000	0,6321	dst
dst	dst	dst	



Y(s) '= 1/(s(s + 1))

T = 0,2 seconds





Y(z)=G(z)*U(z)=z²/((z-1)(z-0,8187))

y(t) = inverse Laplace dari **Y(s)**

Menentukan y(k), k = 0,1,2,3,4,5, ... dengan metode pembagian:

k = 0	k = 1	k= 2	k =3	k=4	
z^0	z^{-1}	z^{-2}	z^{-3}	z^{-1}	
1	1,8187	2,4890	3,5590	4,4350	dst

$z^2-1,8187z+0,8187 \,/\, z^2$

$z^2-1,8187z+0,8187$ −

$1,8187z-0,8187$

$1,8187z-3,30767+0,9676z^{-1}$ −

$2,48897-0,9676z^{-1}$

$2,48897-4,5266z^{-1}+2,0377z^{-2}$ −

$3,5590z^{-1}-2,0377z^{-2}$

$3,5590z^{-1}-6,4727z^{-2}+2,9137z^{-3}$ −

$+4,4350z^{-2}-2,9137z^{-3}$

dst

Ternyata y(k), k = 0,1,2,3,4, ... TIDAK mewakili y(t), t = 0, 0,2, 0,4, 0,6, 0,8 dst