1. Konvolucija [\bigl(\step( t )\dirac(t-t_0)\dirac(t+t_0)+1\bigr) \ast \dirac(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Cstep%28%20t%20%29%5Cdirac%28t-t_0%29%5Cdirac%28t%2Bt_0%29%2B1%5Cbigr%29%20%5Cast%20%5Cdirac%28t%2Bt_0%29) je: 1
2. Konvolucija [\dirac(t-2) \ast \bigl(\exp( t ) + \cos( t )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t-2%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20t%20%29%20%2B%20%5Ccos%28%20t%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp(t-2)+\cos(t-2)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28t-2%29%2B%5Ccos%28t-2%29)
3. Konvolucija [\bigl(\sin( n ) \ast \delta( n+m )\bigr)\delta(n-m)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Csin%28%20n%20%29%20%5Cast%20%5Cdelta%28%20n%2Bm%20%29%5Cbigr%29%5Cdelta%28n-m%29) je: Ispravan odgovor je: [\sin(2m) \delta(n-m)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Csin%282m%29%20%5Cdelta%28n-m%29)
4. Konvolucija [x( n ) \ast \bigl(\delta( n+3 )+\delta( n-3 )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%20%5Cast%20%5Cbigl%28%5Cdelta%28%20n%2B3%20%29%2B%5Cdelta%28%20n-3%20%29%5Cbigr%29) je: Ispravan odgovor je: [x( n-3 )+x( n+3 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n-3%20%29%2Bx%28%20n%2B3%20%29)
5. Konvolucija [\bigl(\sin( t ) \ast \dirac(t+2)\bigr)\dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Csin%28%20t%20%29%20%5Cast%20%5Cdirac%28t%2B2%29%5Cbigr%29%5Cdirac%28t-1%29) je: Ispravan odgovor je: [\sin(3) \dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Csin%283%29%20%5Cdirac%28t-1%29)
6. Konvolucija [\delta( n-1 ) \ast \bigl(\exp( n ) + \cos( n )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-1%20%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20n%20%29%20%2B%20%5Ccos%28%20n%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp( n-1) +\cos( n-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28%20n-1%29%20%2B%5Ccos%28%20n-1%29)
7. Konvolucija [x( n ) \ast \bigl(\delta( n+m )+\delta( n-m )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%20%5Cast%20%5Cbigl%28%5Cdelta%28%20n%2Bm%20%29%2B%5Cdelta%28%20n-m%20%29%5Cbigr%29) je: Ispravan odgovor je: [x( n-m )+x( n+m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n-m%20%29%2Bx%28%20n%2Bm%20%29)
8. Konvolucija [\dirac(t+3) \ast x(t+1) \ast \dirac(3 t-1) ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t%2B3%29%20%5Cast%20x%28t%2B1%29%20%5Cast%20%5Cdirac%283%20t-1%29%20) je: Ispravan odgovor je: Ništa od navedenoga!
9. Konvolucija [\bigl(x( t )+y( t ) \ast \dirac(t+2)\bigr) \ast \dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28x%28%20t%20%29%2By%28%20t%20%29%20%5Cast%20%5Cdirac%28t%2B2%29%5Cbigr%29%20%5Cast%20%5Cdirac%28t-1%29) je: Ispravan odgovor je: [x(t-1)+y(t+1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-1%29%2By%28t%2B1%29)
10. Konvolucija [\delta( n-m) \ast \bigl(\exp( n ) + \cos( n )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-m%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20n%20%29%20%2B%20%5Ccos%28%20n%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp( n-m )+\cos( n-m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28%20n-m%20%29%2B%5Ccos%28%20n-m%20%29)
11. Konvolucija [(a t+b) \ast \dirac(c t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%28a%20t%2Bb%29%20%5Cast%20%5Cdirac%28c%20t-t_0%29) ([t_0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t_0), [a](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=a), [b](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=b) i [c](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=c) su realne konstante, [t](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t) je vrijeme) je: ništa od navedenog
12. Konvolucija [\delta( n-3 ) \ast x( n+1 ) \ast \delta( n+2 ) ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-3%20%29%20%5Cast%20x%28%20n%2B1%20%29%20%5Cast%20%5Cdelta%28%20n%2B2%20%29%20) je: x(n)
13. Konvolucija [\bigl(\step( n )\delta( n-1 )\delta( n+4 )+1\bigr) \ast \delta( n+2 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Cstep%28%20n%20%29%5Cdelta%28%20n-1%20%29%5Cdelta%28%20n%2B4%20%29%2B1%5Cbigr%29%20%5Cast%20%5Cdelta%28%20n%2B2%20%29) je: 1
14. Konvolucija [\bigl(x( n )+y( n ) \ast \delta( n+5 )\bigr) \ast \delta( n-2 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28x%28%20n%20%29%2By%28%20n%20%29%20%5Cast%20%5Cdelta%28%20n%2B5%20%29%5Cbigr%29%20%5Cast%20%5Cdelta%28%20n-2%20%29) je: Ispravan odgovor je: [x( n-2 )+y( n+3 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n-2%20%29%2By%28%20n%2B3%20%29)
15. Konvolucija [(3n+2) \ast \delta( 3n-6 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%283n%2B2%29%20%5Cast%20%5Cdelta%28%203n-6%20%29) je: 3n-4
16. Konvolucija [\bigl(\step( t )\dirac(t-t_0)\dirac(t+t_0)+1\bigr) \ast \dirac(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Cstep%28%20t%20%29%5Cdirac%28t-t_0%29%5Cdirac%28t%2Bt_0%29%2B1%5Cbigr%29%20%5Cast%20%5Cdirac%28t%2Bt_0%29) je: 1
17. Konvolucija [\delta( n-1 ) \ast \bigl(\exp( n ) + \cos( n )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-1%20%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20n%20%29%20%2B%20%5Ccos%28%20n%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp( n-1) +\cos( n-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28%20n-1%29%20%2B%5Ccos%28%20n-1%29)
18. Konvolucija [\bigl(\sin( t ) \ast \dirac(t+2)\bigr)\dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Csin%28%20t%20%29%20%5Cast%20%5Cdirac%28t%2B2%29%5Cbigr%29%5Cdirac%28t-1%29) je: Ispravan odgovor je: [\sin(3) \dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Csin%283%29%20%5Cdirac%28t-1%29)
19. Konvolucija [(a t+b) \ast \dirac(c t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%28a%20t%2Bb%29%20%5Cast%20%5Cdirac%28c%20t-t_0%29) ([t_0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t_0), [a](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=a), [b](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=b) i [c](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=c) su realne konstante, [t](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t) je vrijeme) je: Ispravan odgovor je: [a/|c|(t- t_0/c)+b/|c|](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=a%2F%7Cc%7C%28t-%20t_0%2Fc%29%2Bb%2F%7Cc%7C)
20. Konvolucija [\delta( n-m) \ast \bigl(\exp( n ) + \cos( n )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-m%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20n%20%29%20%2B%20%5Ccos%28%20n%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp( n-m )+\cos( n-m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28%20n-m%20%29%2B%5Ccos%28%20n-m%20%29)
21. Konvolucija [x( n ) \ast \bigl(\delta( n+m )+\delta( n-m )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%20%5Cast%20%5Cbigl%28%5Cdelta%28%20n%2Bm%20%29%2B%5Cdelta%28%20n-m%20%29%5Cbigr%29) je: Ispravan odgovor je: [x( n-m )+x( n+m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n-m%20%29%2Bx%28%20n%2Bm%20%29)
22. Konvolucija [\bigl(x( t )+y( t ) \ast \dirac(t+2)\bigr) \ast \dirac(t-1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28x%28%20t%20%29%2By%28%20t%20%29%20%5Cast%20%5Cdirac%28t%2B2%29%5Cbigr%29%20%5Cast%20%5Cdirac%28t-1%29) je: Ispravan odgovor je: [x(t-1)+y(t+1)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-1%29%2By%28t%2B1%29)
23. Konvolucija [\bigl(x( n )+y( n ) \ast \delta( n+5 )\bigr) \ast \delta( n-2 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28x%28%20n%20%29%2By%28%20n%20%29%20%5Cast%20%5Cdelta%28%20n%2B5%20%29%5Cbigr%29%20%5Cast%20%5Cdelta%28%20n-2%20%29) je: Ispravan odgovor je: [x( n-2 )+y( n+3 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n-2%20%29%2By%28%20n%2B3%20%29)
24. Konvolucija [\dirac(t-2) \ast \bigl(\exp( t ) + \cos( t )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t-2%29%20%5Cast%20%5Cbigl%28%5Cexp%28%20t%20%29%20%2B%20%5Ccos%28%20t%20%29%5Cbigr%29) je: Ispravan odgovor je: [\exp(t-2)+\cos(t-2)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cexp%28t-2%29%2B%5Ccos%28t-2%29)
25. Konvolucija [\delta( n-3 ) \ast x( n+1 ) \ast \delta( n+2 ) ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-3%20%29%20%5Cast%20x%28%20n%2B1%20%29%20%5Cast%20%5Cdelta%28%20n%2B2%20%29%20) je: x(n)
26. Samo jedno od navedenih svojstva jest svojstvo DISTRIBUTIVNOSTI konvolucije vremenski kontinuiranih signala konačne energije! Koje? [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29), [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) i [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) su vremenski kontinuirani signali dok je [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) realan broj. Ispravan odgovor je: [x( t )*\bigl(y( t ) + z( t )\bigr)=x( t )*y( t )+x( t )*z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2A%5Cbigl%28y%28%20t%20%29%20%2B%20z%28%20t%20%29%5Cbigr%29%3Dx%28%20t%20%29%2Ay%28%20t%20%29%2Bx%28%20t%20%29%2Az%28%20t%20%29)
27. Profesor tumači da je odziv vremenski diskretnog, vremenski stalnog i mirnog sustava na jedinični skok [\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cstep%28%20n%20%29) impulsni odziv sustava. Smatrate da je to: netočno
28. Konvolucija vremenski diskretnih signala konačne energije JEST komutativna operacija! Točno
29. Periodična (cirkularna ili kruža) konvolucija dva vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne snage i perioda [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) je definirana izrazom: Ispravan odgovor je: [x( t )\ccnv{*}y( t )=\int_{0}^{T}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cccnv%7B%2A%7Dy%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7BT%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
30. Konvolucija [(a t+b) \ast \dirac(c t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%28a%20t%2Bb%29%20%5Cast%20%5Cdirac%28c%20t-t_0%29) ([t_0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t_0), [a](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=a), [b](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=b) i [c](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=c) su realne konstante, [t](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t) je vrijeme) je: Ispravan odgovor je: [a/|c|(t- t_0/c)+b/|c|](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=a%2F%7Cc%7C%28t-%20t_0%2Fc%29%2Bb%2F%7Cc%7C)
31. Konvolucija [\bigl(x( t )+y( t ) \ast \dirac(t+2t_0)\bigr) \ast \dirac(t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28x%28%20t%20%29%2By%28%20t%20%29%20%5Cast%20%5Cdirac%28t%2B2t_0%29%5Cbigr%29%20%5Cast%20%5Cdirac%28t-t_0%29) je: Ispravan odgovor je: [x(t-t_0)+y(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-t_0%29%2By%28t%2Bt_0%29)
32. Konvolucija [\dirac(t+3) \ast x(t+1) \ast \dirac(3 t-1) ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t%2B3%29%20%5Cast%20x%28t%2B1%29%20%5Cast%20%5Cdirac%283%20t-1%29%20) je: Ispravan odgovor je: [x(t+4-1/3)/3](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t%2B4-1%2F3%29%2F3)
33. Konvolucija [\bigl(\sin( n ) \ast \delta( n+1)\bigr)\delta( n-2)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cbigl%28%5Csin%28%20n%20%29%20%5Cast%20%5Cdelta%28%20n%2B1%29%5Cbigr%29%5Cdelta%28%20n-2%29) je: Ispravan odgovor je: [\sin(3)\delta( n-2)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Csin%283%29%5Cdelta%28%20n-2%29)
34. Samo jedno od navedenih svojstva jest svojstvo ASOCIJATIVNOSTI konvolucije vremenski kontinuiranih signala konačne energije! Koje? [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29), [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) i [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) su vremenski diskretni signali dok je [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) realan broj. Ispravan odgovor je: [x( t )*\bigl(y( t )*z( t )\bigr)=\bigl(x( t )*y( t )\bigr)*z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2A%5Cbigl%28y%28%20t%20%29%2Az%28%20t%20%29%5Cbigr%29%3D%5Cbigl%28x%28%20t%20%29%2Ay%28%20t%20%29%5Cbigr%29%2Az%28%20t%20%29)
35. Konvolucija vremenski diskretnih signala konačne energije NIJE asocijativna operacija: netočno
36. Neki složeni vremenski diskretni sustav se sastoji od kaskade dvaju linearnih vremenski stalnih sustava čiji impulsni odzivi su [h_1( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_1%28%20n%20%29) i [h_2( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_2%28%20n%20%29). Ako na ulaz u kaskadu dovedemo signal [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) što ćemo dobiti na izlazu? Ispravan odgovor je: [x( n )\ast h_1( n ) \ast h_2( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cast%20h_1%28%20n%20%29%20%5Cast%20h_2%28%20n%20%29)
37. Periodična (cirkularna ili kruža) konvolucija dva vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne snage i perioda [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) je definirana izrazom: Ispravan odgovor je: [x( t )\ccnv{*}y( t )=\int_{0}^{T}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cccnv%7B%2A%7Dy%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7BT%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
38. Za koju od navedenih funkcija [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) vrijedi [x( n ) \ast y( n )=x( n+1 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%20%5Cast%20y%28%20n%20%29%3Dx%28%20n%2B1%20%29)? Ispravan odgovor je: [\delta( n+1 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%2B1%20%29)
39. Odziv vremenski kontinuiranog sustava [S\bigl[u( t )\bigr]=\int_{-\infty}^{t}u( \tau )\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20t%20%29%5Cbigr%5D%3D%5Cint_%7B-%5Cinfty%7D%5E%7Bt%7Du%28%20%5Ctau%20%29%5C%2Cd%5Ctau) na Diracovu distribuciju [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29) je: Ispravan odgovor je: [h( t )=\step( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20t%20%29%3D%5Cstep%28%20t%20%29)
40. Linearna konvolucija dva vremenski diskretna i KAUZALNA signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je za [n\ge0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=n%5Cge0) definirana izrazom: Ispravan odgovor je: [x( n )*y( n )=\sum_{i=0}^{n}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D0%7D%5E%7Bn%7Dx%28i%29y%28n-i%29)
41. Neka je vremenski diskretni signal [f( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=f%28%20n%20%29) jednak konvoluciji signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29), odnosno neka vrijedi [f( n )=x( n ) \ast y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=f%28%20n%20%29%3Dx%28%20n%20%29%20%5Cast%20y%28%20n%20%29). Čemu je jednak izraz [x( n+1 ) \ast y( n+1 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%2B1%20%29%20%5Cast%20y%28%20n%2B1%20%29)? Ispravan odgovor je: [f( n+2 )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=f%28%20n%2B2%20%29)
42. Samo jedno od navedenih svojstva jest svojstvo KOMUTATIVNOSTI konvolucije vremenski kontinuiranih signala konačne energije! Koje? [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29), [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) i [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) su vremenski kontinuirani signali dok je [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) realan broj. Ispravan odgovor je: [x( t )*y( t )=y( t )*x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3Dy%28%20t%20%29%2Ax%28%20t%20%29)
43. Linearna konvolucija dva vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije je definirana izrazom: Ispravan odgovor je: [x( t )*y( t )=\int_{-\infty}^{+\infty}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D%5Cint_%7B-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
44. Samo jedan od navedenih izraza jest definicija periodične (kružne ili cirkularne) konvolucija dva periodična vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne snage perioda [N](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=N). Koji?Ispravan odgovor je: [x( n )\ccnv{*}y( n )=\sum_{i=0}^{N-1}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cccnv%7B%2A%7Dy%28%20n%20%29%3D%5Csum_%7Bi%3D0%7D%5E%7BN-1%7Dx%28i%29y%28n-i%29)
45. Za koji od navedenih signala [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) vrijedi [x( t ) \ast y( t )=x(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29%3Dx%28t%2Bt_0%29)? Ispravan odgovor je: [\dirac(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t%2Bt_0%29)
46. Samo jedno od navedenih svojstva jest svojstvo KOMUTATIVNOSTI konvolucije vremenski diskretnih signala konačne energije! Koje? [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29), [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) i [z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20n%20%29) su vremenski diskretni signali dok je [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) cijeli broj. Ispravan odgovor je: [x( n )*y( n )=y( n )*x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3Dy%28%20n%20%29%2Ax%28%20n%20%29)
47. Impulsni odziv vremenski kontinuiranog linearn vremenski stalnog sustava je odziv mirnog sustava na: diracovu distribuciju
48. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=n}^{0}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3Dn%7D%5E%7B0%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( -n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20-n%20%29)
49. Profesor tumači da je odziv vremenski diskretnog, vremenski stalnog i mirnog sustava na jedinični skok [\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cstep%28%20n%20%29) impulsni odziv sustava. Smatrate da je to: netočno
50. Profesor tumači da je odziv vremenski diskretnog, linearnog, vremenski stalnog i mirnog sustava na Kroneckerov niz [\dirac( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20n%20%29)impulsni odziv sustava. Smatrate da je to: točno
51. Linearna konvolucija dva vremenski diskretna i KAUZALNA signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je za [n<0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=n%3C0) definirana izrazom: x(n)\*y(n)=0
52. Za koji od navedenih vremenski diskretnih signala [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) vrijedi [x( n ) \ast y( n )=x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%20%5Cast%20y%28%20n%20%29%3Dx%28%20n%20%29)? Ispravan odgovor je: [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29)
53. Konvolucija vremenski kontinuiranih signala konačne energije NIJE distributivna operacija! Netočno
54. Samo jedan od navedenih izraza jest definicija linearne konvolucija dva vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije. Koji? Ispravan odgovor je: [x( t )*y( t )=\int_{-\infty}^{+\infty}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D%5Cint_%7B-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
55. Promatramo li konvolucije vremenski diskretnih signala koji nemaju konačnu energiju tada svojstvo asocijativnosti konvolucije NE vrijedi! Točno
56. Odziv vremenski kontinuiranog sustava [S\bigl[u( t )\bigr]=\int_{t}^{+\infty}u( \tau )\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20t%20%29%5Cbigr%5D%3D%5Cint_%7Bt%7D%5E%7B%2B%5Cinfty%7Du%28%20%5Ctau%20%29%5C%2Cd%5Ctau) na Diracovu distribuciju [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29) je: Ispravan odgovor je: [h( t )=\step( -t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20t%20%29%3D%5Cstep%28%20-t%20%29)
57. Samo jedno od navedenih svojstva jest svojstvo ASOCIJATIVNOSTI konvolucije vremenski diskretnih signala konačne energije! Koje? [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29), [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) i [z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20n%20%29) su vremenski diskretni signali dok je [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) cijeli broj. Ispravan odgovor je: [x( n )*\bigl(y( n )*z( n )\bigr)=\bigl(x( n )*y( n )\bigr)*z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2A%5Cbigl%28y%28%20n%20%29%2Az%28%20n%20%29%5Cbigr%29%3D%5Cbigl%28x%28%20n%20%29%2Ay%28%20n%20%29%5Cbigr%29%2Az%28%20n%20%29)
58. Samo jedan od navedenih izraza jest definicija periodične (kružne ili cirkularne) konvolucija dva periodična vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne snage perioda [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T). Koji? Ispravan odgovor je: [x( t )\ccnv{*}y( t )=\int_{0}^{T}x(\tau)y(t-\tau)\,d\tau ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cccnv%7B%2A%7Dy%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7BT%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau%20)
59. Samo jedna od navedenih tvrdnji o konvoluciji vremenski kontinuiranih signala konačne enerijge je ispravna! Koja? Ispravan odgovor je: Konvolucija signala s Diracovom distribucijom [\dirac(t)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t%29) ne mijenja signal.
60. Neki složeni vremenski kontinuirani sustav se sastoji od kaskade dvaju linearnih vremenski stalnih sustava čiji impulsni odzivi su [h_1( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_1%28%20t%20%29) i [h_2( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_2%28%20t%20%29). Ako na ulaz u kaskadu dovedemo signal [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) što ćemo dobiti na izlazu? Ispravan odgovor je: [x( t )\ast h_1( t ) \ast h_2( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cast%20h_1%28%20t%20%29%20%5Cast%20h_2%28%20t%20%29)
61. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=n}^{+\infty}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3Dn%7D%5E%7B%2B%5Cinfty%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( -n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20-n%20%29)
62. Periodična (cirkularna ili kruža) konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne snage i perioda [N](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=N) je definirana izrazom: Ispravan odgovor je: [x( n )\ccnv{*}y( n )=\sum_{i=0}^{N-1}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cccnv%7B%2A%7Dy%28%20n%20%29%3D%5Csum_%7Bi%3D0%7D%5E%7BN-1%7Dx%28i%29y%28n-i%29)
63. Samo jedno od navedenih svojstva jest svojstvo DISTRIBUTIVNOSTI konvolucije vremenski kontinuiranih signala konačne energije! Koje? [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29), [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) i [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) su vremenski kontinuirani signali dok je [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) realan broj. Ispravan odgovor je: [x( t )*\bigl(y( t ) + z( t )\bigr)=x( t )*y( t )+x( t )*z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2A%5Cbigl%28y%28%20t%20%29%20%2B%20z%28%20t%20%29%5Cbigr%29%3Dx%28%20t%20%29%2Ay%28%20t%20%29%2Bx%28%20t%20%29%2Az%28%20t%20%29)
64. Linearna konvolucija dva vremenski kontinuirana i KAUZALNA signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije jest za [t<0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t%3C0)definirana izrazom: Ispravan odgovor je: [x( t )*y( t )=0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D0)
65. Samo jedno od navedenih svojstva jest svojstvo DISTRIBUTIVNOSTI konvolucije vremenski kontinuiranih signala konačne energije! Koje? [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29), [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) i [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) su vremenski kontinuirani signali dok je [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T) realan broj. Ispravan odgovor je: [x( t )*\bigl(y( t ) + z( t )\bigr)=x( t )*y( t )+x( t )*z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2A%5Cbigl%28y%28%20t%20%29%20%2B%20z%28%20t%20%29%5Cbigr%29%3Dx%28%20t%20%29%2Ay%28%20t%20%29%2Bx%28%20t%20%29%2Az%28%20t%20%29)
66. Neki složeni vremenski kontinuirani sustav se sastoji od paralenog spoja dvaju linearnih vremenski stalnih sustava čiji impulsni odzivi su [h_1( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_1%28%20t%20%29) i [h_2( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_2%28%20t%20%29). Ako na ulaz u paralelnog spoja dovedemo signal [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) što ćemo dobiti na izlazu? Ispravan odgovor je: [x( t )\ast\bigl(  h_1( t ) + h_2( t )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cast%5Cbigl%28%20%20h_1%28%20t%20%29%20%2B%20h_2%28%20t%20%29%5Cbigr%29)
67. Konvolucijom dva vremenski diskretna jedinična skoka [\step( n ) \ast \step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cstep%28%20n%20%29%20%5Cast%20%5Cstep%28%20n%20%29) dobivamo: Ispravan odgovor je: [(n+1)\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%28n%2B1%29%5Cstep%28%20n%20%29)
68. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=-\infty}^{n}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3D-%5Cinfty%7D%5E%7Bn%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20n%20%29)
69. Samo jedno od navedenih svojstva iskazuje postojanje NEUTRALNOG ELEMENTA za operaciju konvolucije vremenski diskretnih signala konačne energije! Koje? [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29), [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) i [z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20n%20%29) su vremenski diskretni signali dok je [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) cijeli broj.

Ispravan odgovor je: [x( n )*\delta( n )=\delta( n )*x( n )=x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2A%5Cdelta%28%20n%20%29%3D%5Cdelta%28%20n%20%29%2Ax%28%20n%20%29%3Dx%28%20n%20%29)

1. Samo jedan od navedenih izraza jest definicija linearne konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije. Koji? Ispravan odgovor je: [x( n )*y( n )=\sum_{i=-\infty}^{+\infty}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28i%29y%28n-i%29)
2. Da bi konvolucija [x( t ) \ast y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29) bila jednaka [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) s kašnjenjem od [t_0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t_0) tada [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) mora biti: Ispravan odgovor je: [\dirac(t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t-t_0%29)
3. Samo jedno od navedenih svojstva jest svojstvo DISTRIBUTIVNOSTI konvolucije vremenski diskretnih signala konačne energije! Koje? [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29), [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) i [z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20n%20%29) su vremenski diskretni signali dok je [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) cijeli broj. Ispravan odgovor je: [x( n )*\bigl(y( n ) + z( n )\bigr)=x( n )*y( n )+x( n )*z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2A%5Cbigl%28y%28%20n%20%29%20%2B%20z%28%20n%20%29%5Cbigr%29%3Dx%28%20n%20%29%2Ay%28%20n%20%29%2Bx%28%20n%20%29%2Az%28%20n%20%29)
4. Linearna konvolucija dva vremenski kontinuirana i KAUZALNA signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije jest za [t\ge0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t%5Cge0)definirana izrazom: Ispravan odgovor je: [x( t )*y( t )=\int_{0}^{t}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7Bt%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
5. Linearna konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je definirana izrazom: Ispravan odgovor je: [x( n )*y( n )=\sum_{i=-\infty}^{+\infty}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28i%29y%28n-i%29)
6. Neka je vremenski kontinuirani signal [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) zadan kao [z( t )=x( t ) \ast y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29%3Dx%28%20t%20%29%20%5Cast%20y%28%20t%20%29). Čemu je jednako [x(t-t_0) \ast y(t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-t_0%29%20%5Cast%20y%28t-t_0%29)? Ispravan odgovor je: [z( t-2t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t-2t_0%29)
7. Konvolucija vremenski kontinuiranih signala konačne energije NIJE komutativna operacija! netočno
8. Kako nazivamo odziv mirnog sustava na Diracovu distribuciju [\delta(t)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28t%29)? Impulsni odziv
9. Konvolucijom dva jedinična skoka [\step( t ) \ast \step( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cstep%28%20t%20%29%20%5Cast%20%5Cstep%28%20t%20%29) dobivamo: Ispravan odgovor je: [t  \step( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t%20%20%5Cstep%28%20t%20%29)
10. Konvolucija [x( t ) \ast \bigl(\dirac(t+2)+\dirac(t-3)\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20%5Cbigl%28%5Cdirac%28t%2B2%29%2B%5Cdirac%28t-3%29%5Cbigr%29) je: Ispravan odgovor je: [x(t-3)+x(t+2)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-3%29%2Bx%28t%2B2%29)
11. Linearna konvolucija dva vremenski diskretna i KAUZALNA signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je za [n\ge0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=n%5Cge0) definirana izrazom: Ispravan odgovor je: [x( n )*y( n )=\sum_{i=0}^{n}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D0%7D%5E%7Bn%7Dx%28i%29y%28n-i%29)
12. Samo jedna od navedenih tvrdnji o konvoluciji vremenski kontinuiranih signala konačne enerijge nije točna! Koja? Konvolucija je kumulativna
13. Linearna konvolucija dva vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije je definirana izrazom: Ispravan odgovor je: [x( t )*y( t )=\int_{-\infty}^{+\infty}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D%5Cint_%7B-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
14. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=0}^{n}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3D0%7D%5E%7Bn%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20n%20%29)
15. Konvolucija vremenski diskretnih signala konačne energije JEST komutativna operacija! Točno
16. Kako nazivamo odziv mirnog sustava na Diracovu distribuciju [\delta(t)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28t%29)? Impulsni odziv
17. Da bi konvolucija [x( n )\ast y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cast%20y%28%20n%20%29) bila jednaka [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) s kašnjenjem od [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) koraka tada [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) mora biti: Ispravan odgovor je: [\delta( n-m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-m%20%29)
18. Neki složeni vremenski diskretni sustav se sastoji od kaskade dvaju linearnih vremenski stalnih sustava čiji impulsni odzivi su [h_1( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_1%28%20n%20%29) i [h_2( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_2%28%20n%20%29). Ako na ulaz u kaskadu dovedemo signal [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) što ćemo dobiti na izlazu? Ispravan odgovor je: [x( n )\ast h_1( n ) \ast h_2( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cast%20h_1%28%20n%20%29%20%5Cast%20h_2%28%20n%20%29)
19. Linearna konvolucija dva vremenski kontinuirana i KAUZALNA signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije jest za [t<0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t%3C0)definirana izrazom: x(t)\*y(t)=0
20. Konvolucija vremenski diskretnih signala konačne energije JEST distributivna operacija! Točno
21. Linearna konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je definirana izrazom: Ispravan odgovor je: [x( n )*y( n )=\sum_{i=-\infty}^{+\infty}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28i%29y%28n-i%29)
22. Za koji od navedenih vremenski kontinuiranih signala [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) vrijedi [x( t ) \ast y( t )=x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29%3Dx%28%20t%20%29), odnosno koji signal jest neutralni element za konvoluciju? Ispravan odgovor je: [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29)
23. Impulsni odziv vremenski kontinuiranog linearn vremenski stalnog sustava je odziv mirnog sustava na: diracovu distribuciju
24. Konvolucija vremenski kontinuiranih signala konačne energije JEST asocijativna operacija! Točno
25. Samo jedno od navedenih svojstva jest svojstvo ASOCIJATIVNOSTI konvolucije vremenski diskretnih signala konačne energije! Koje? [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29), [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) i [z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20n%20%29) su vremenski diskretni signali dok je [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) cijeli broj. Ispravan odgovor je: [x( n )*\bigl(y( n )*z( n )\bigr)=\bigl(x( n )*y( n )\bigr)*z( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2A%5Cbigl%28y%28%20n%20%29%2Az%28%20n%20%29%5Cbigr%29%3D%5Cbigl%28x%28%20n%20%29%2Ay%28%20n%20%29%5Cbigr%29%2Az%28%20n%20%29)
26. Konvolucijom dva vremenski diskretna jedinična skoka [\step( n ) \ast \step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cstep%28%20n%20%29%20%5Cast%20%5Cstep%28%20n%20%29) dobivamo: Ispravan odgovor je: [(n+1)\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%28n%2B1%29%5Cstep%28%20n%20%29)
27. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=n}^{0}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3Dn%7D%5E%7B0%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( -n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20-n%20%29)
28. Da bi konvolucija [x( n )\ast y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cast%20y%28%20n%20%29) bila jednaka [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) s kašnjenjem od [m](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=m) koraka tada [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) mora biti: Ispravan odgovor je: [\delta( n-m )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n-m%20%29)
29. Linearna konvolucija dva vremenski diskretna i KAUZALNA signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije je za [n<0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=n%3C0) definirana izrazom: x(n)\*y(n)=0
30. Odziv vremenski kontinuiranog sustava [S\bigl[u( t )\bigr]=\int_{-\infty}^{t}u( \tau )\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20t%20%29%5Cbigr%5D%3D%5Cint_%7B-%5Cinfty%7D%5E%7Bt%7Du%28%20%5Ctau%20%29%5C%2Cd%5Ctau) na Diracovu distribuciju [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29) je: Ispravan odgovor je: [h( t )=\step( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20t%20%29%3D%5Cstep%28%20t%20%29)
31. Samo jedan od navedenih izraza jest definicija periodične (kružne ili cirkularne) konvolucija dva periodična vremenski kontinuirana signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne snage perioda [T](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=T). Koji? Ispravan odgovor je: [x( t )\ccnv{*}y( t )=\int_{0}^{T}x(\tau)y(t-\tau)\,d\tau ](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cccnv%7B%2A%7Dy%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7BT%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau%20)
32. Da bi konvolucija [x( t ) \ast y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29) bila jednaka [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) s kašnjenjem od [t_0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t_0) tada [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) mora biti: Ispravan odgovor je: [\dirac(t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t-t_0%29)
33. Neka je vremenski kontinuirani signal [z( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29) zadan kao [z( t )=x( t ) \ast y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t%20%29%3Dx%28%20t%20%29%20%5Cast%20y%28%20t%20%29). Čemu je jednako [x(t-t_0) \ast y(t-t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28t-t_0%29%20%5Cast%20y%28t-t_0%29)? Ispravan odgovor je: [z( t-2t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=z%28%20t-2t_0%29)
34. Odziv vremenski diskretnog sustava [S\bigl[u( n )\bigr]=\sum_{i=0}^{n}u( i )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20n%20%29%5Cbigr%5D%3D%5Csum_%7Bi%3D0%7D%5E%7Bn%7Du%28%20i%20%29) na Kroneckerov impuls [\delta( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdelta%28%20n%20%29) je: Ispravan odgovor je: [h( n )=\step( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20n%20%29%3D%5Cstep%28%20n%20%29)
35. Neki složeni vremenski kontinuirani sustav se sastoji od paralenog spoja dvaju linearnih vremenski stalnih sustava čiji impulsni odzivi su [h_1( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_1%28%20t%20%29) i [h_2( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h_2%28%20t%20%29). Ako na ulaz u paralelnog spoja dovedemo signal [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) što ćemo dobiti na izlazu? Ispravan odgovor je: [x( t )\ast\bigl(  h_1( t ) + h_2( t )\bigr)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%5Cast%5Cbigl%28%20%20h_1%28%20t%20%29%20%2B%20h_2%28%20t%20%29%5Cbigr%29)
36. Periodična (cirkularna ili kruža) konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne snage i perioda [N](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=N) je definirana izrazom: Ispravan odgovor je: [x( n )\ccnv{*}y( n )=\sum_{i=0}^{N-1}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%5Cccnv%7B%2A%7Dy%28%20n%20%29%3D%5Csum_%7Bi%3D0%7D%5E%7BN-1%7Dx%28i%29y%28n-i%29)
37. Za koji od navedenih vremenski kontinuiranih signala [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) vrijedi [x( t ) \ast y( t )=x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29%3Dx%28%20t%20%29), odnosno koji signal jest neutralni element za konvoluciju? Ispravan odgovor je: [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29)
38. Konvolucija vremenski diskretnih signala konačne energije NIJE asocijativna operacija! Netočno
39. Linearna konvolucija dva vremenski kontinuirana i KAUZALNA signala [x( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29) i [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) konačne energije jest za [t\ge0](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=t%5Cge0)definirana izrazom: Ispravan odgovor je: [x( t )*y( t )=\int_{0}^{t}x(\tau)y(t-\tau)\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%2Ay%28%20t%20%29%3D%5Cint_%7B0%7D%5E%7Bt%7Dx%28%5Ctau%29y%28t-%5Ctau%29%5C%2Cd%5Ctau)
40. Za koji od navedenih signala [y( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20t%20%29) vrijedi [x( t ) \ast y( t )=x(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20t%20%29%20%5Cast%20y%28%20t%20%29%3Dx%28t%2Bt_0%29)? Ispravan odgovor je: [\dirac(t+t_0)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28t%2Bt_0%29)
41. Odziv vremenski kontinuiranog sustava [S\bigl[u( t )\bigr]=\int_{t}^{+\infty}u( \tau )\,d\tau](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=S%5Cbigl%5Bu%28%20t%20%29%5Cbigr%5D%3D%5Cint_%7Bt%7D%5E%7B%2B%5Cinfty%7Du%28%20%5Ctau%20%29%5C%2Cd%5Ctau) na Diracovu distribuciju [\dirac( t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=%5Cdirac%28%20t%20%29) je: Ispravan odgovor je: [h( t )=\step( -t )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=h%28%20t%20%29%3D%5Cstep%28%20-t%20%29)
42. Samo jedan od navedenih izraza jest definicija linearne konvolucija dva vremenski diskretna signala [x( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29) i [y( n )](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=y%28%20n%20%29) konačne energije. Koji? Ispravan odgovor je: [x( n )*y( n )=\sum_{i=-\infty}^{+\infty}x(i)y(n-i)](https://moodle.fer.hr/filter/tex/displaytex.php?texexp=x%28%20n%20%29%2Ay%28%20n%20%29%3D%5Csum_%7Bi%3D-%5Cinfty%7D%5E%7B%2B%5Cinfty%7Dx%28i%29y%28n-i%29)