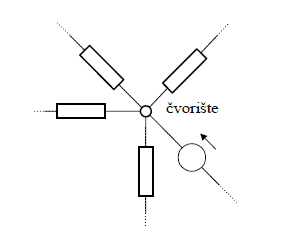
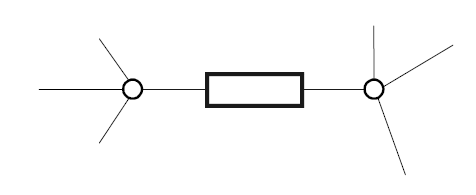
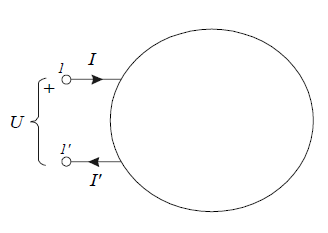
**ČVORIŠTE-**točka u mreži na koju su spojene dvije ili više priključnica.



**GRANA-**element s dvije priključnice spojen na dva čvorišta mreže.

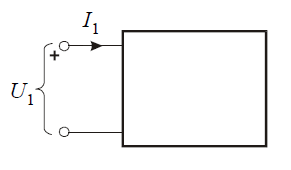


**PRILAZ-**par priključnica ili polova sa svojstvom da struja koja ulazi na jedan pol jednaka je struji koja izlazi kroz drugi (**I=I’**).

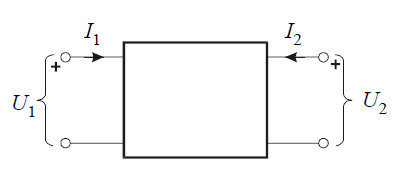


**ELEMENTI ELEKTRIČNIH KRUGOVA:**

**DVOPOLI-**elementi s 2 priključnice



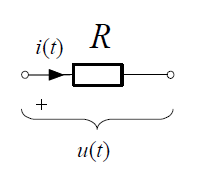
**ČETVEROPOLI-**mreže sa 4 priključnice

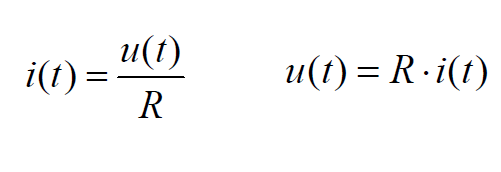


**DVOPOLI**

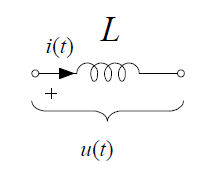
Dvopolni pasivni elementi el. krugova su otpor, induktivitet i kapacitet.

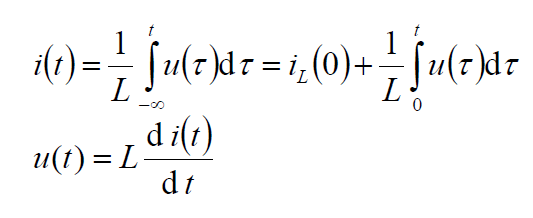
**OTPOR-R** **[Ω-ohm]**



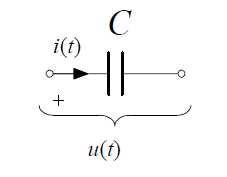


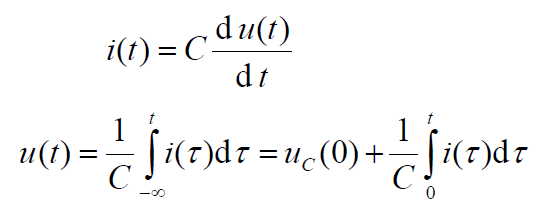
**INDUKTIVITET-L [H-henry]**

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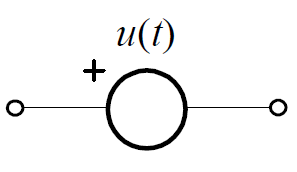
**KAPACITET-C [F-farad]**

****

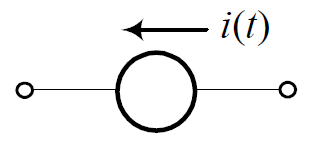
****

**Aktivni dvopoli su izvori funkcija pobude (naponski i strujni izvor).**

**NAPONSKI IZVOR-**element na čijim priključnicama djeluje napon iznosa u(t), bez obzira na iznos struje.

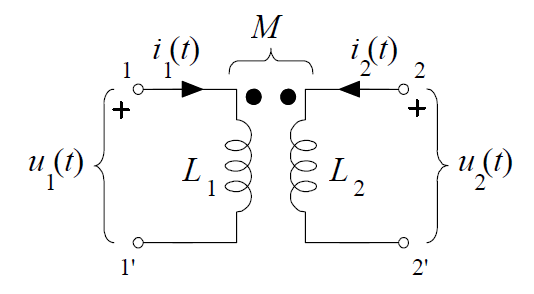
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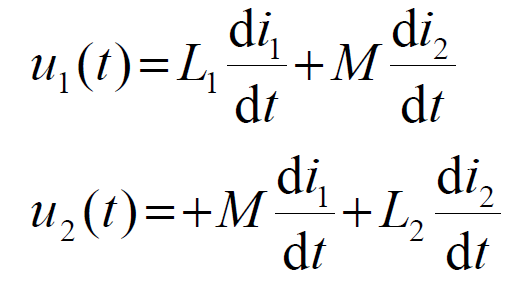
**STRUJNI IZVOR-**element koji definira struju grane i(t), bez obzira na napon između njenih čvorišta.

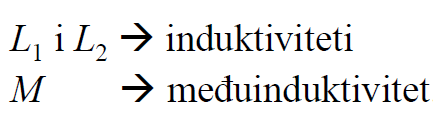


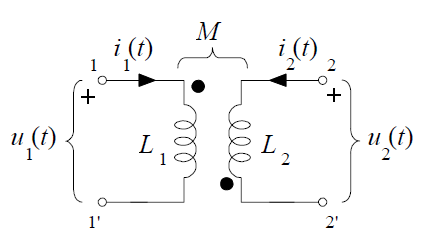
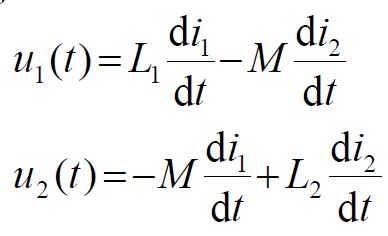
**ČETVEROPOLI**

**TRANSFORMATOR-**dva induktiviteta koji su međuinduktivno vezani.

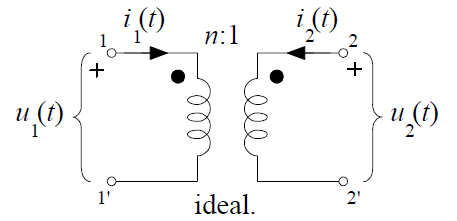


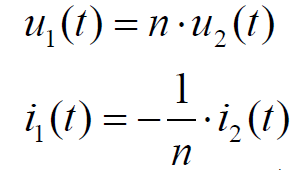
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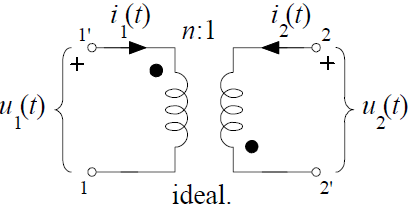
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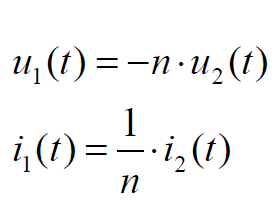
**  
**

**IDEALNI TRANSFORMATOR-**jeu definiran bezdimenzionalnim parametrom n-omjer transformacije

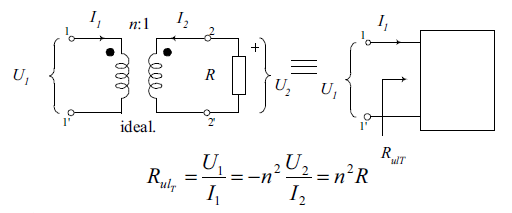




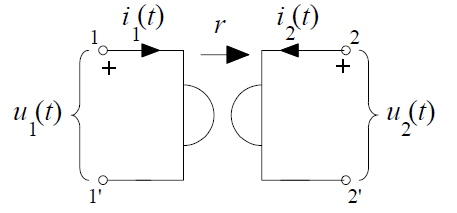


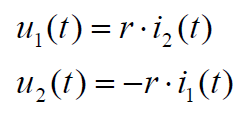
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**Idealni trafo mijenja vrijednost otpora.**



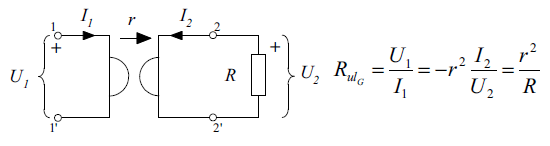
**GIRATOR**

****

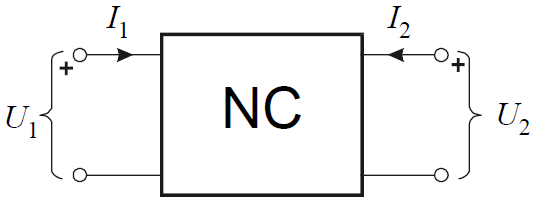
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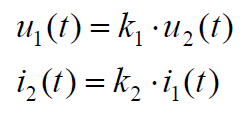
**r-**konstanta koja ima dimenziju otpora

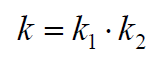
**Girator invertira vrijednost otpora**.

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**NEGATIVNI KONVERTOR**

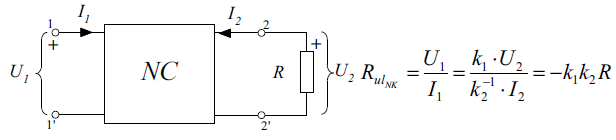
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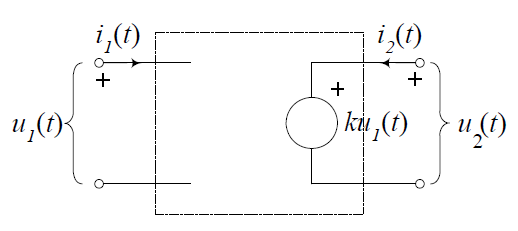
**k-**omjer konverzije

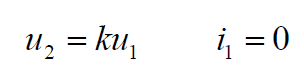
**Negativni konvertor mijenja predznak.**

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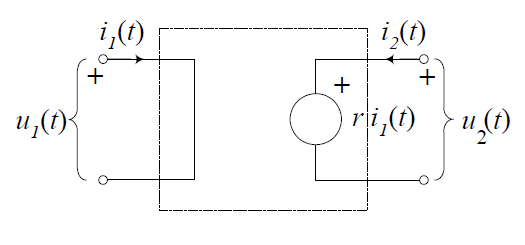
**OVISNI IZVORI-**su aktivni četveropoli, koji sadrže strujni ili naponski izvor ovisan o nekoj struji ili naponu u mreži.

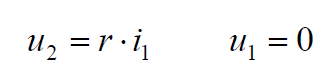
**NONI-**Naponsko ovisni naponski izvor

****

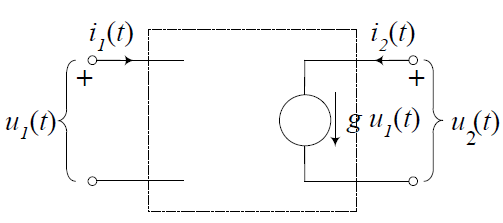
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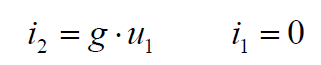
**SONI-**Strujno ovisni naponski izvor



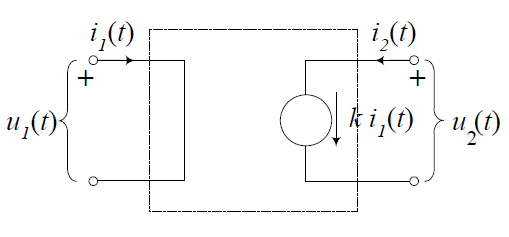


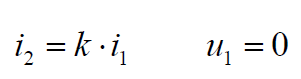
**NOSI-**Naponsko ovisni strujni izvor

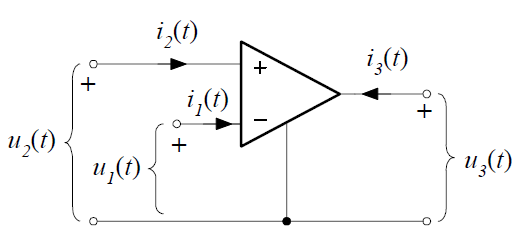


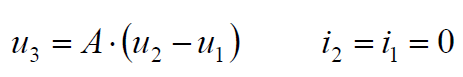
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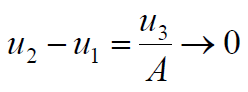
**SOSI-**Strujno ovisni strujni izvor

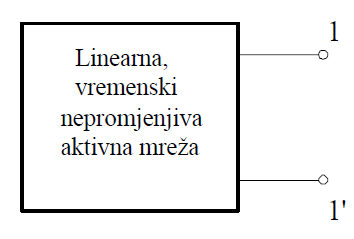




**OPERACIJSKO POJAČALO** 

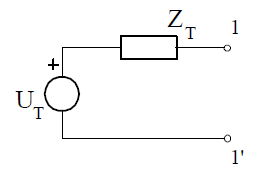


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**THEVENINOV TEOREM**

Svakoj linearnoj, vremenski nepro-mjenjivoj, aktivnoj mreži s jednim prilazom moguće je odrediti ekvivale-ntni dvopol koji se sastoji od jednog neovisnog naponskog izvora UT i jedne serijski spojene impedancije ZT

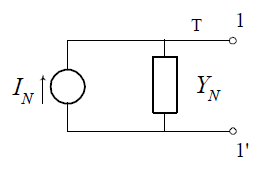
****

**Napon UT** naponskog izvora jednak je naponu na otvorenim priključnicama promatrane mreže.

**Impedancija ZT** je jednaka impedanciji gledanoj sa prilaza mreže uz ugašene sve neovisne izvore (ovisni izvori ostaju u krugu) i uz početne uvjete na kapacitetima i induktivitetima jedna-ke nuli.

**NORTONOV TEOREM**

Svakoj linearnoj, vremenski nepro-mjenjivoj, aktivnoj mreži s jednim prilazom moguće je odrediti ekvivale-ntni dvopol koji se sastoji od jednog neovisnog strujnog izvora IN i jedne paralelno spojene admitancije YN.

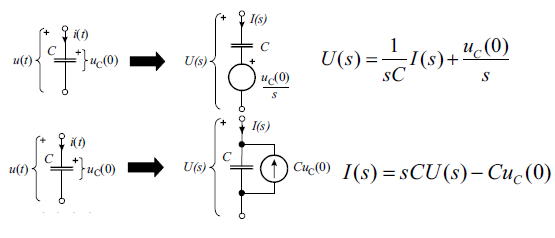


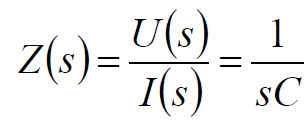
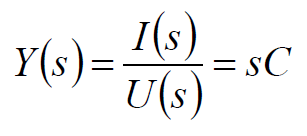
**Struja IN** strujnog izvora jednaka je struji kroz kratko spojene priključnice promatrane mreže.

**Admitancija YN** je jednaka admitanciji gledanoj sa prilaza mreže uz ugašene sve neovisne izvore (ovisni izvori ostaju u krugu) i uz početne uvjete na kapacitetima i induktivitetima jedna-ke nuli.

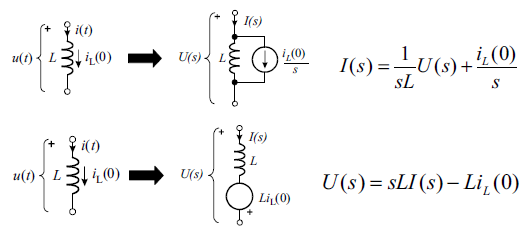
**LAPLACEOVA TRANSFORMACIJA**

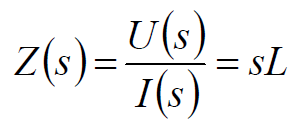
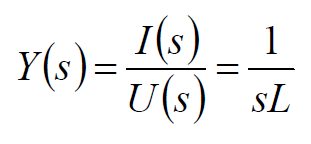
**KAPACITET-C**

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**INDUKTIVITET-L**

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** **

**TABLICA LAPLACEOVIH TRANSFOR.**

|  |  |
| --- | --- |
| **F(s)=[f(t)]** | **f(t)** |
|  | S(t) |
| 1 | δ(t) |
| sn | δ(n)(t) |
|  |  |
|  |  |
|  | t |
|  | S(t-τ) |
|  |  |
|  |  |
|  | sin(ωt)\*S(t) |
|  | cos(ωt)\*S(t) |
|  | sh(ωt)\*S(t) |
|  | ch(ωt)\*S(t) |
|  |  |
|  |  |
|  | \*S(t) |
|  | \*S(t) |
|  | \*S(t) |
|  | \*S(t) |

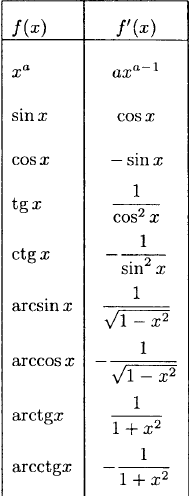
Ako je F(s) 🡨🡪 tada je:

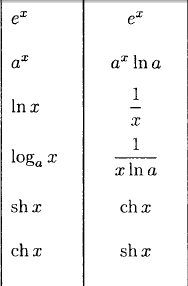
🡨🡪 f(t-a)\*S(t-a) , a>0

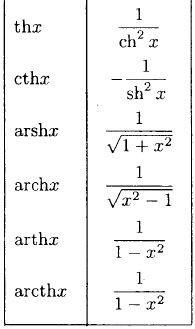
F(s+a) 🡨🡪

F(s-a) 🡨🡪

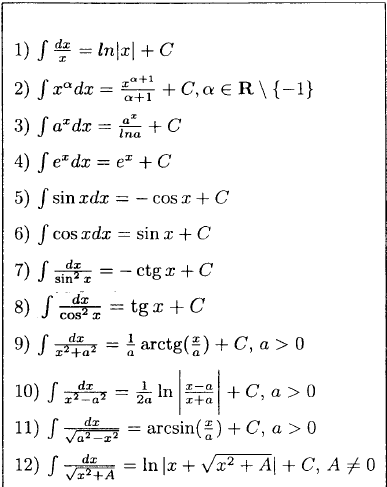
**TABLICA DERIVACIJA**

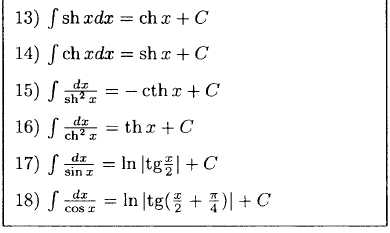
****

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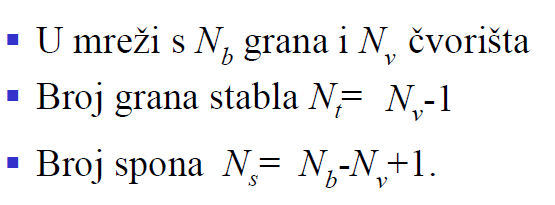
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**TABLICA NEODREĐENIH INTEGRALA**

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**GRAFOVI**

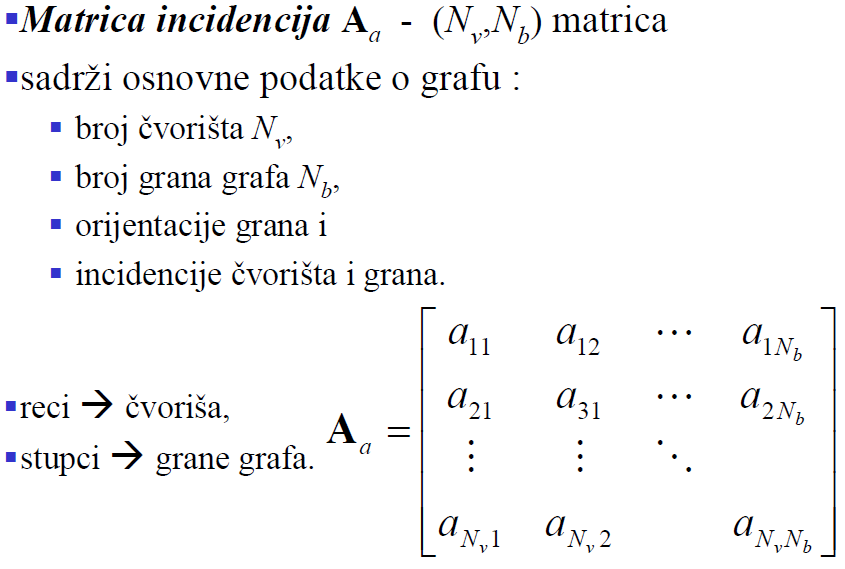
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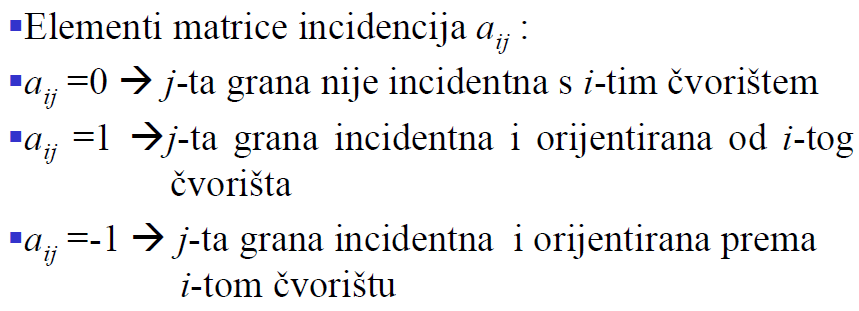
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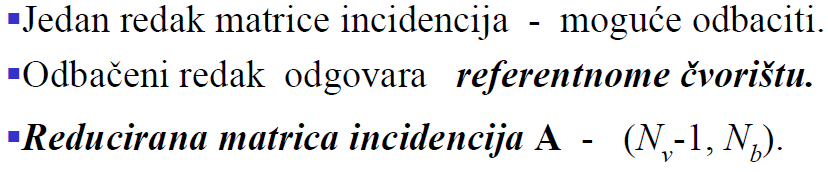
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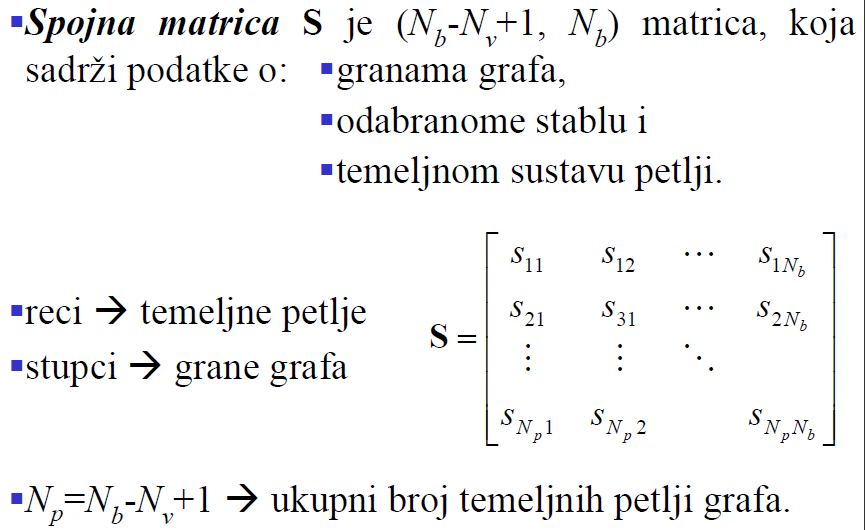
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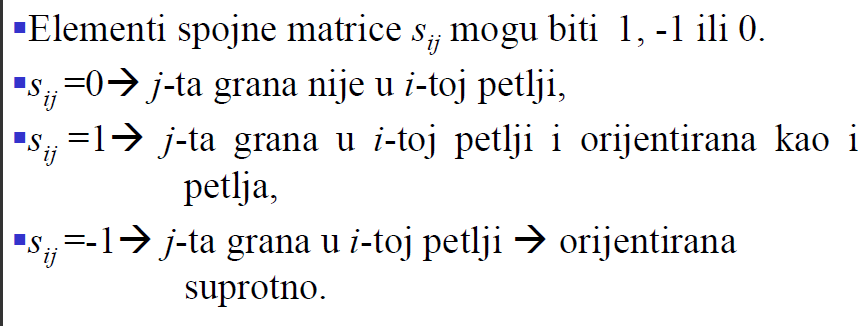
Orijentacija temeljnog reza🡪prema smjeru pripadajuće stablene grane

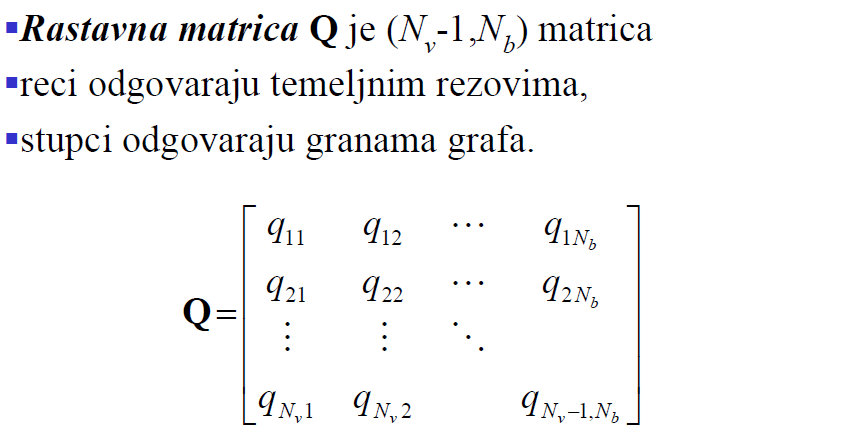


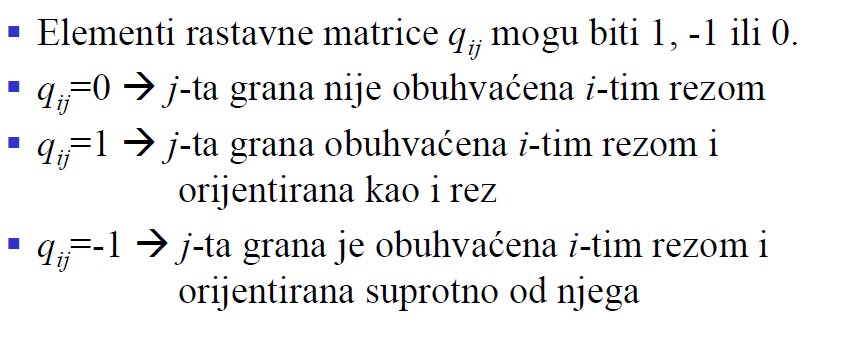




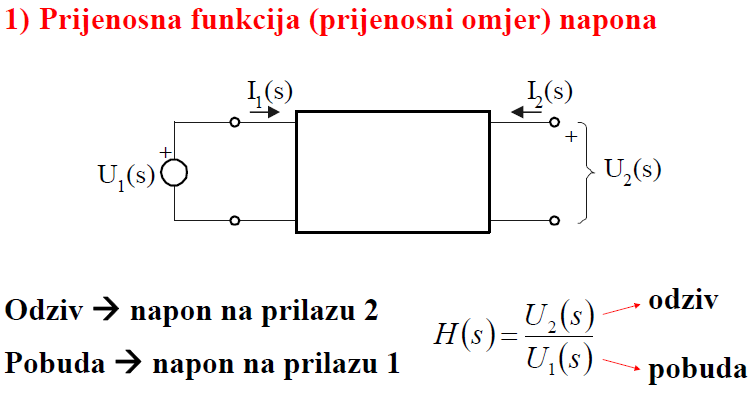


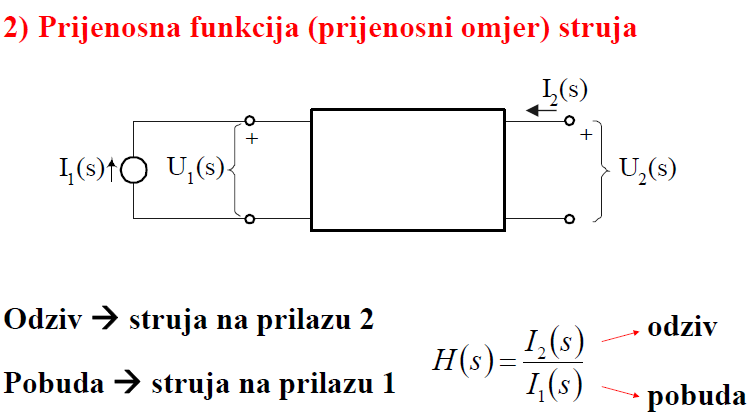


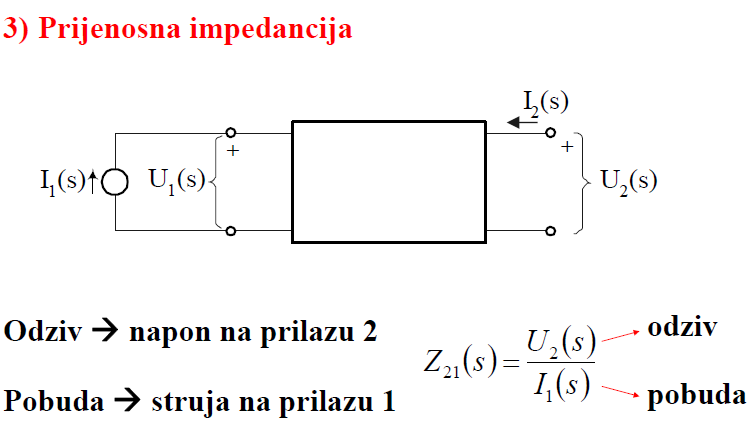


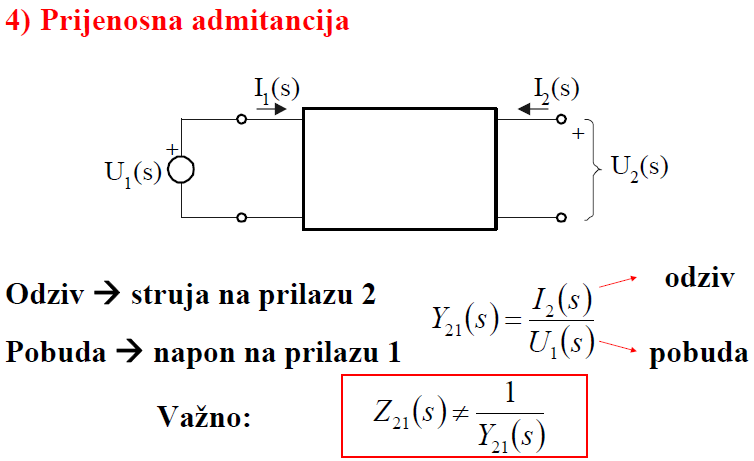


**4. TIPA PRIJENOSNIH FUNKCIJA:**

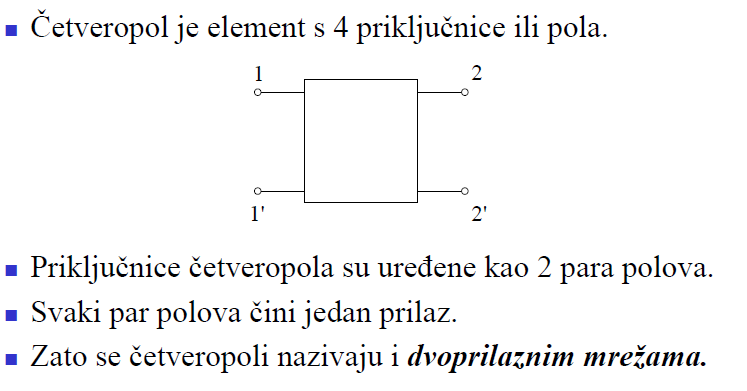
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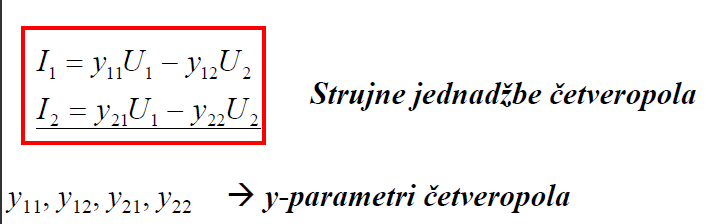
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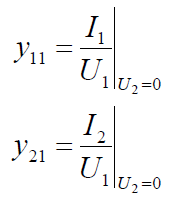
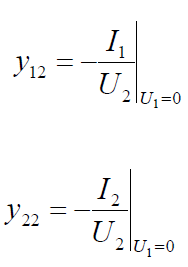
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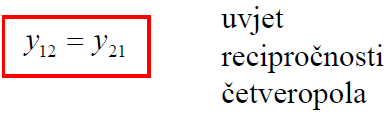
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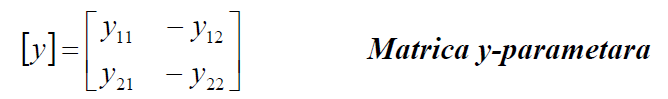
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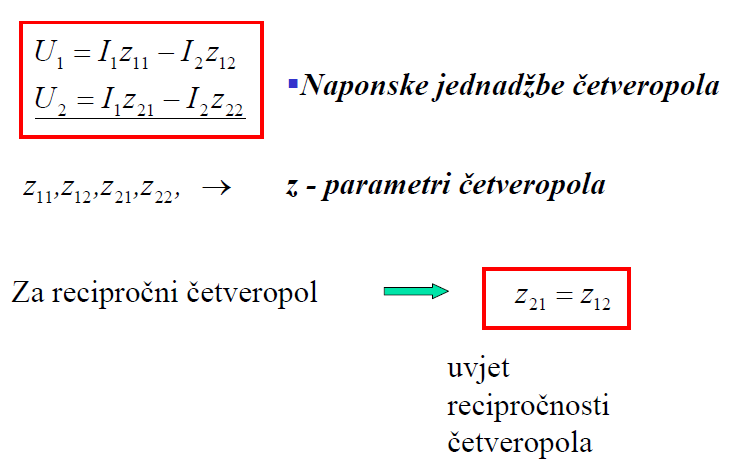
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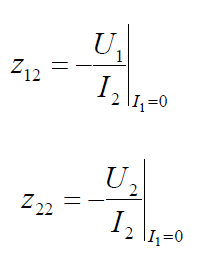
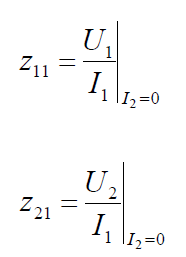
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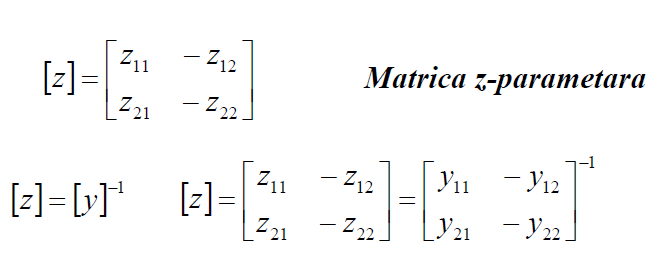
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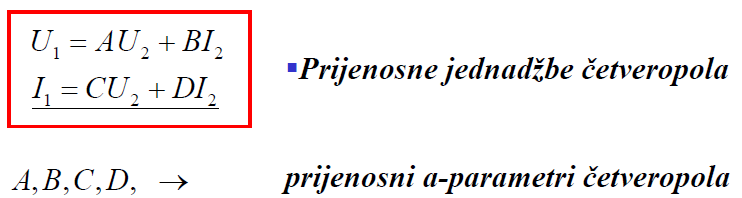
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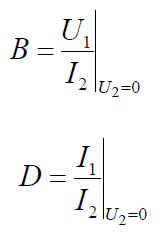
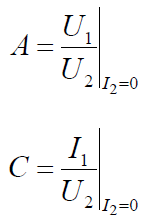
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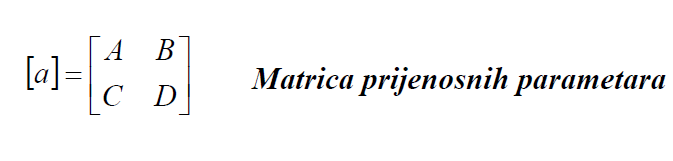
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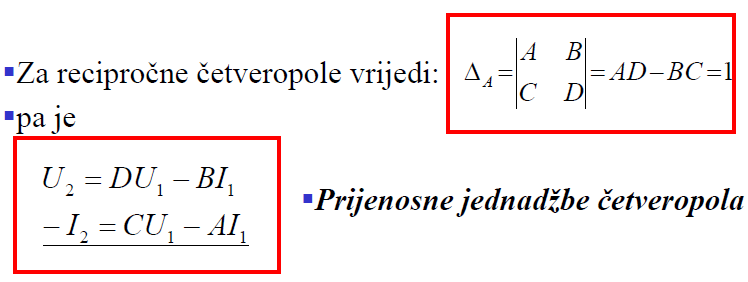
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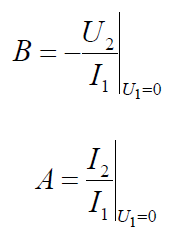
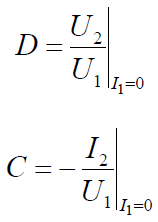
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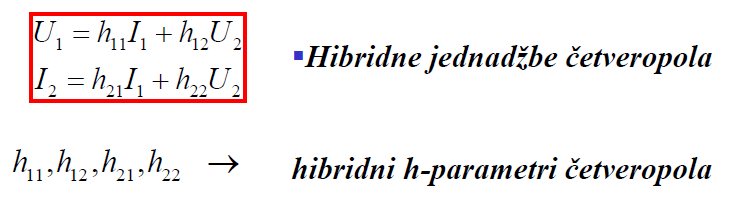
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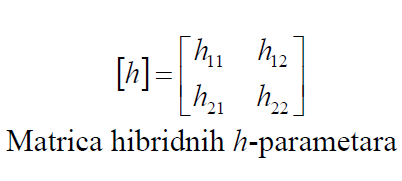
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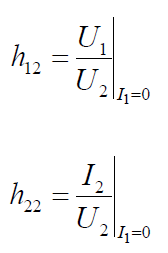
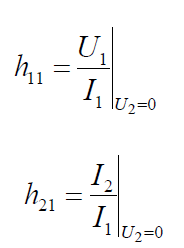
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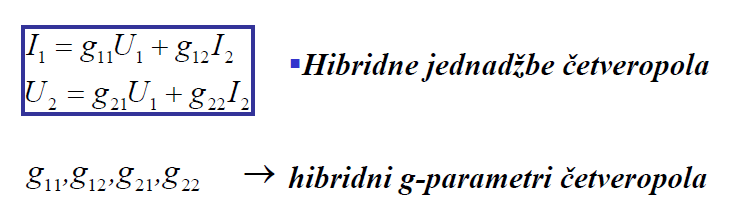
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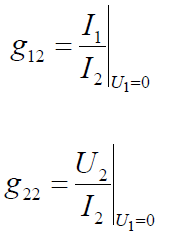
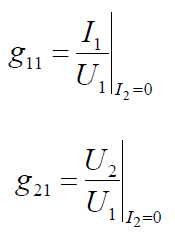
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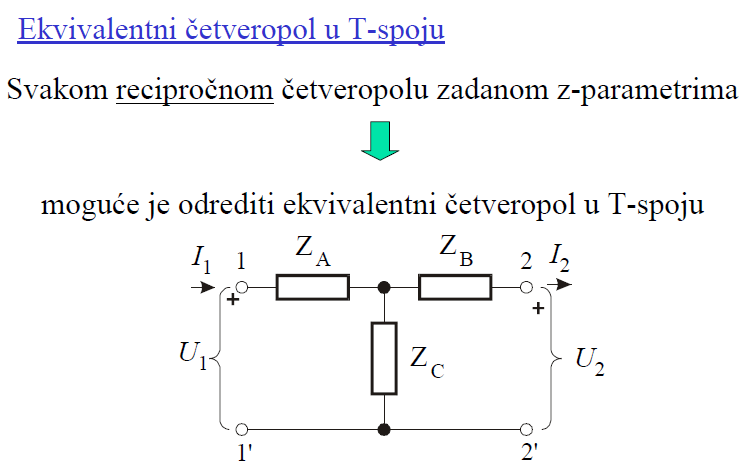
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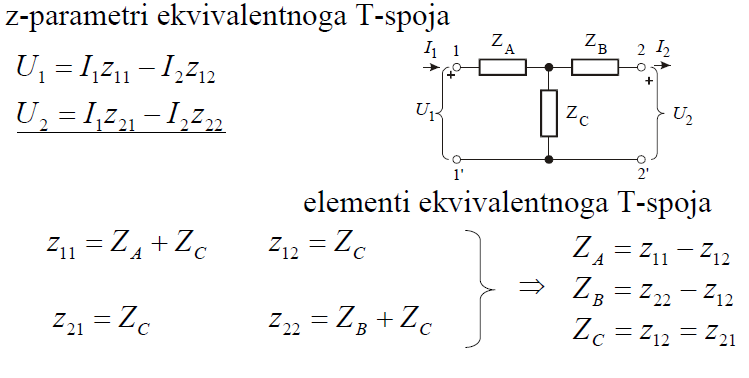
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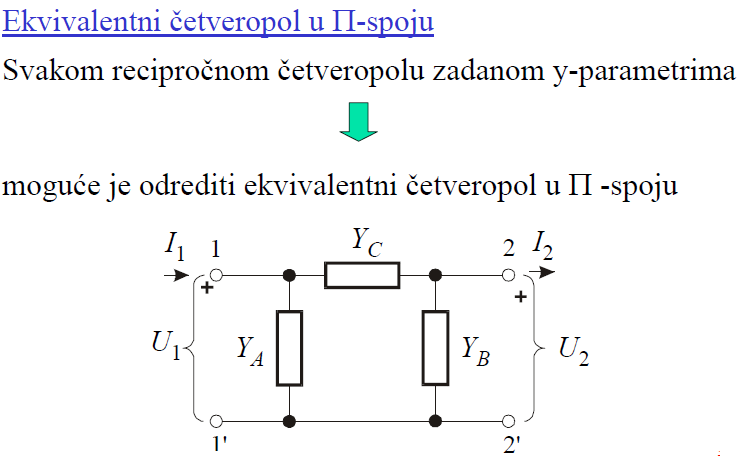
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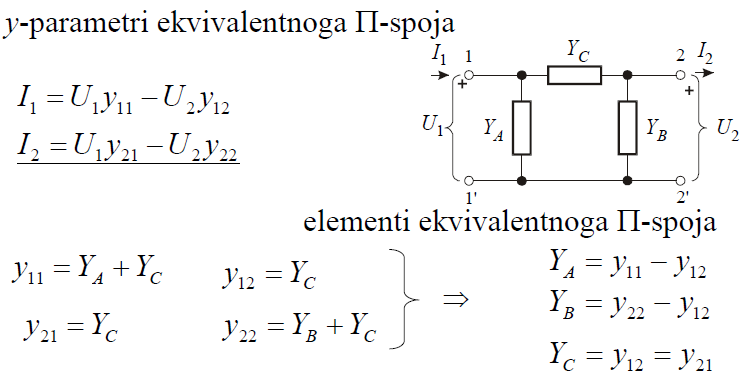
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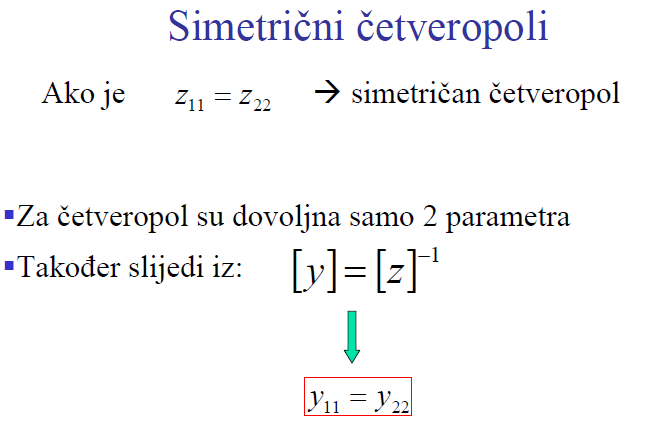
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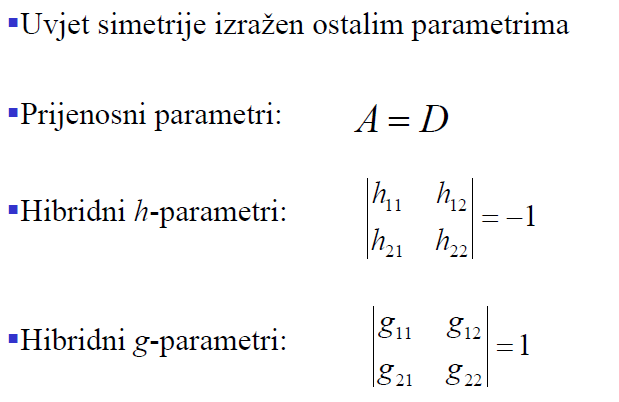
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