

Norme za projektiranje

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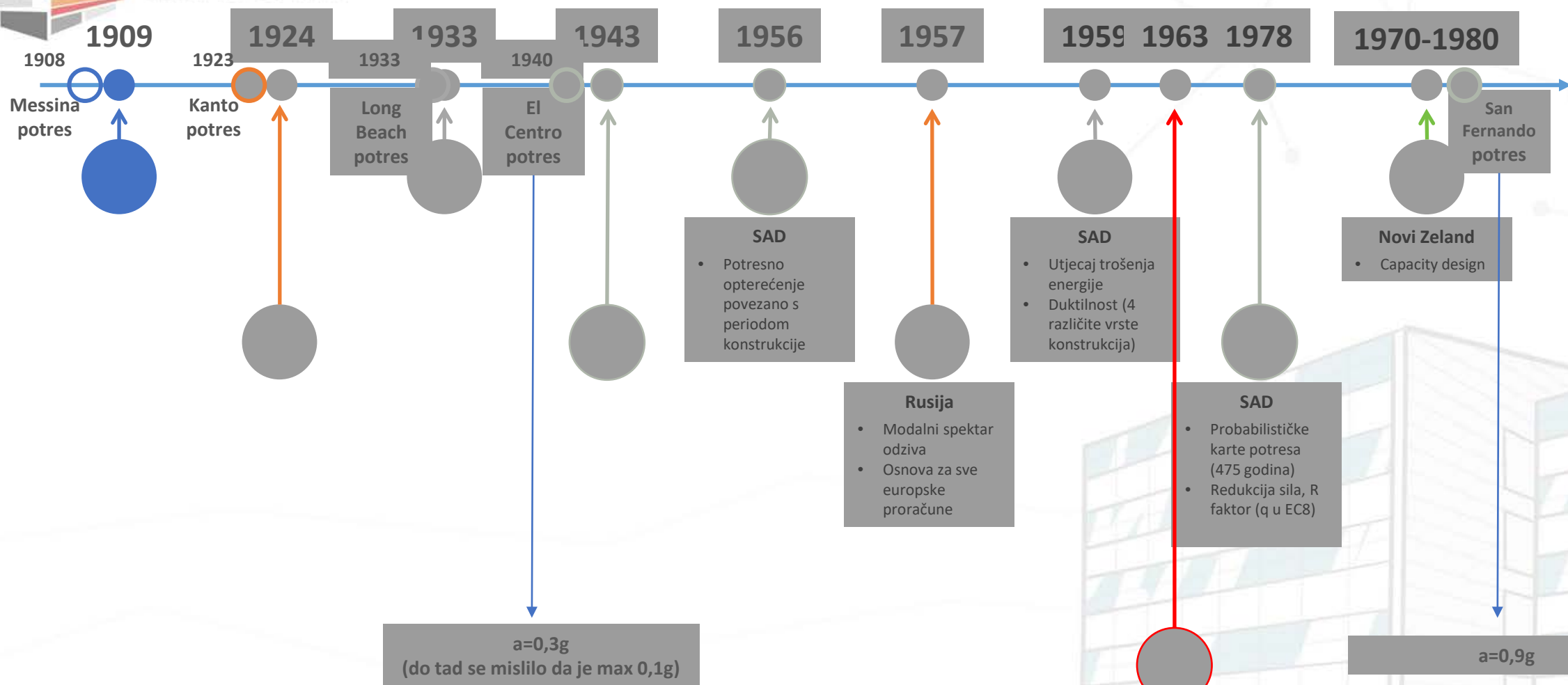
1908

Messina
potres



7.1 Richter, tsunami, 82.000 žrtava, 91% građevina srušeno

Potresno inženjerstvo





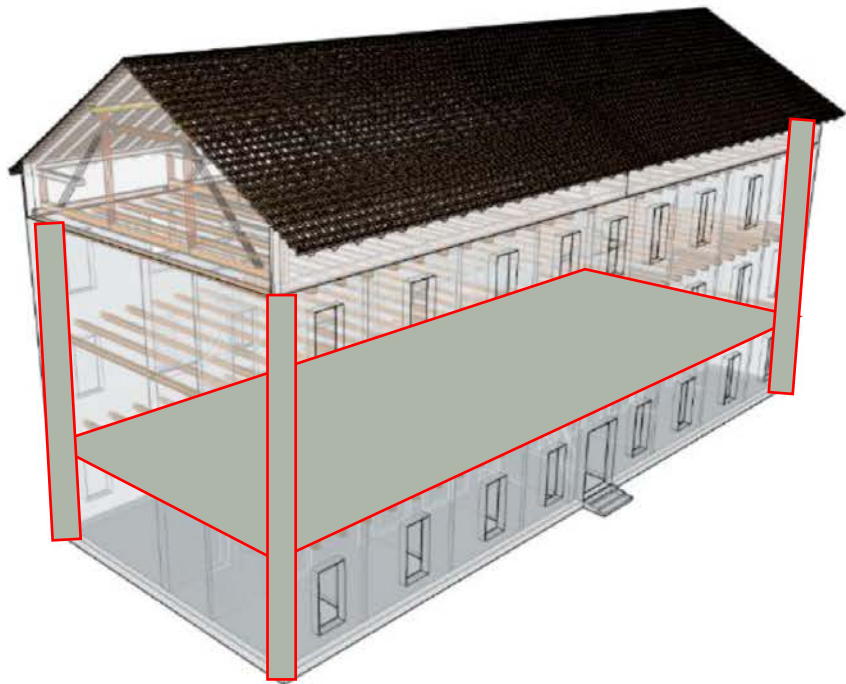
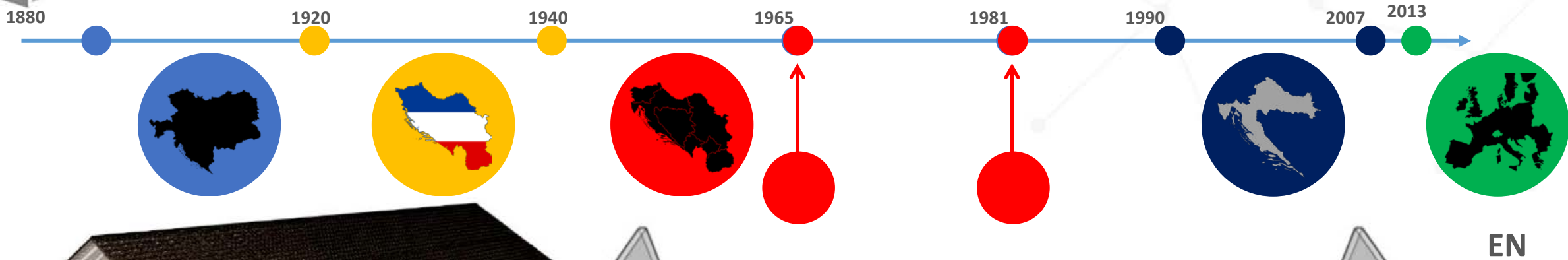
6.9 Richter, 1000 žrtava, 80% grada uništeno





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Norme - Hrvatska





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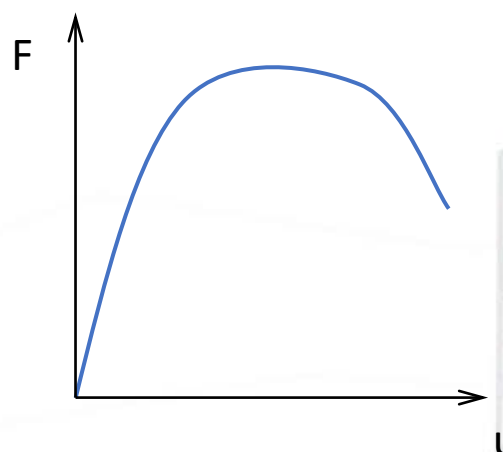
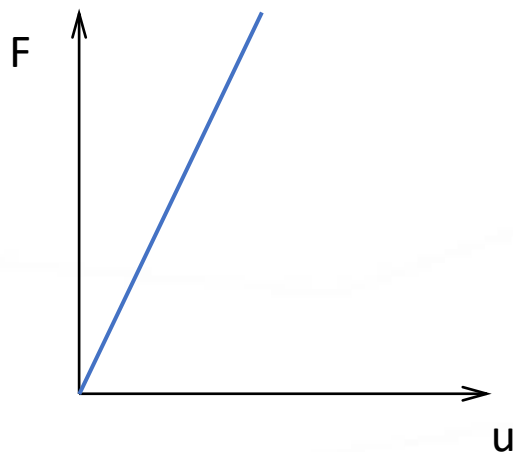
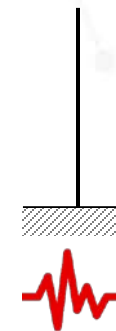
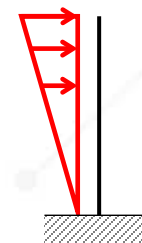
- 1. dio: Opća pravila, potresna djelovanja i pravila za zgrade
- 2. dio: Mostovi
- 3. dio: Ocjenjivanje i obnova zgrada
- 4. dio: Silosi, spremici i cjevovodi
- 5. dio: Temelji, potporne konstrukcije i geotehnička pitanja
- 6. dio: Tornjevi, jarboli i dimnjaci

Eurokod 8: Projektiranje potresne otpornosti konstrukcija



Metode proračuna

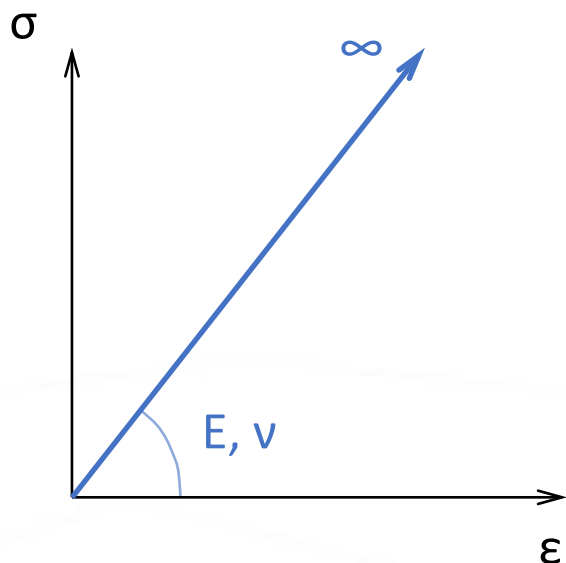
METODE	LINEARNE	NELINEARNE
STATIČKE	Metoda bočnih sila	Metoda postupnog guranja
DINAMIČKE	Višemodalna spektralna analiza	Time-history



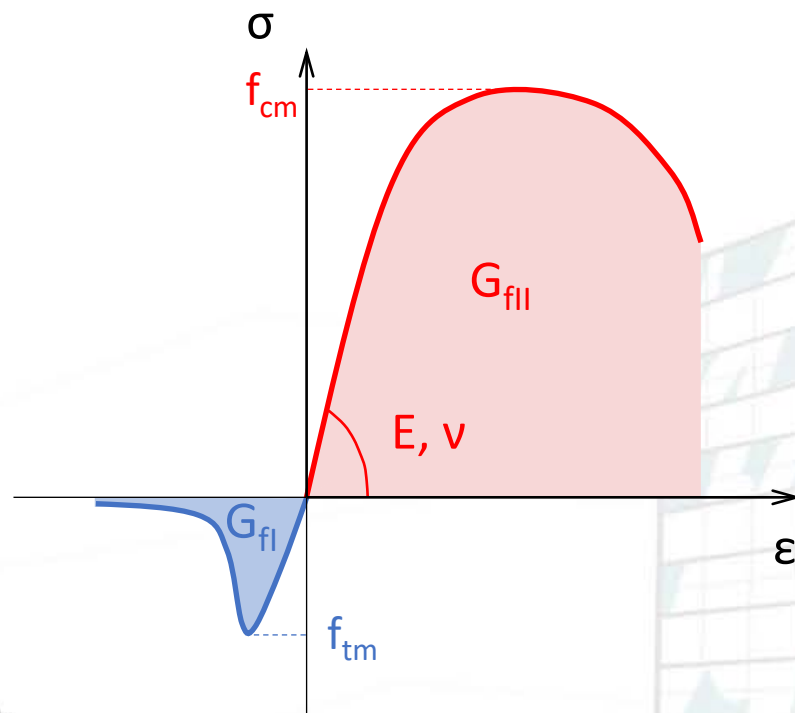
FEM METODA - KORACI

1) DEFINIRANJE MATERIJALA

Linearni proračuni



Nelinearni proračuni



E – modul elastičnosti

ν – Poissonov omjer

f_{cm} – srednja tlačna čvrstoća

f_{tm} – srednja vlačna čvrstoća

G_{fl} – energija loma u vlaku

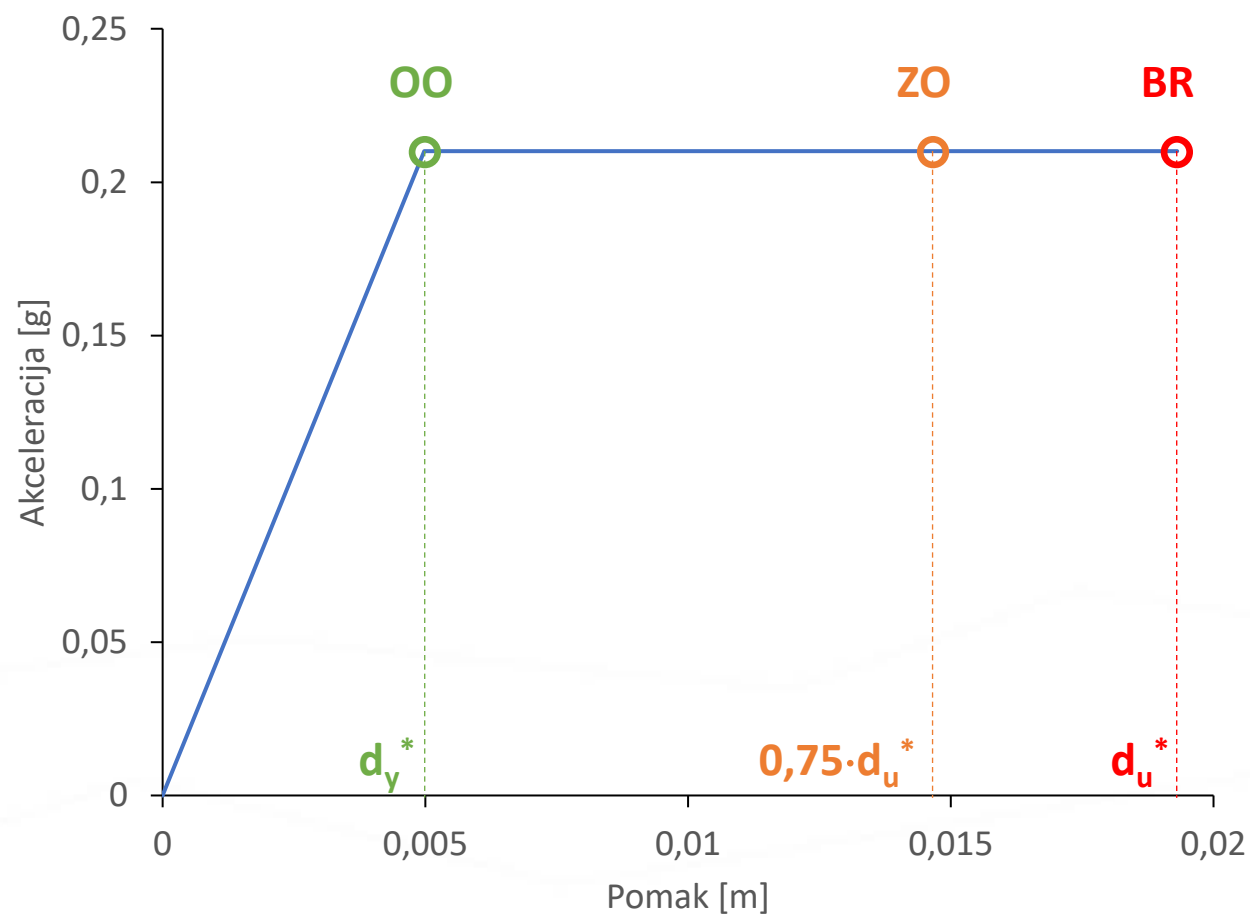
G_{fll} – energija loma u tlaku

tlak

vlak



Metode proračuna



OO – OGRANIČENO OŠTEĆENJE

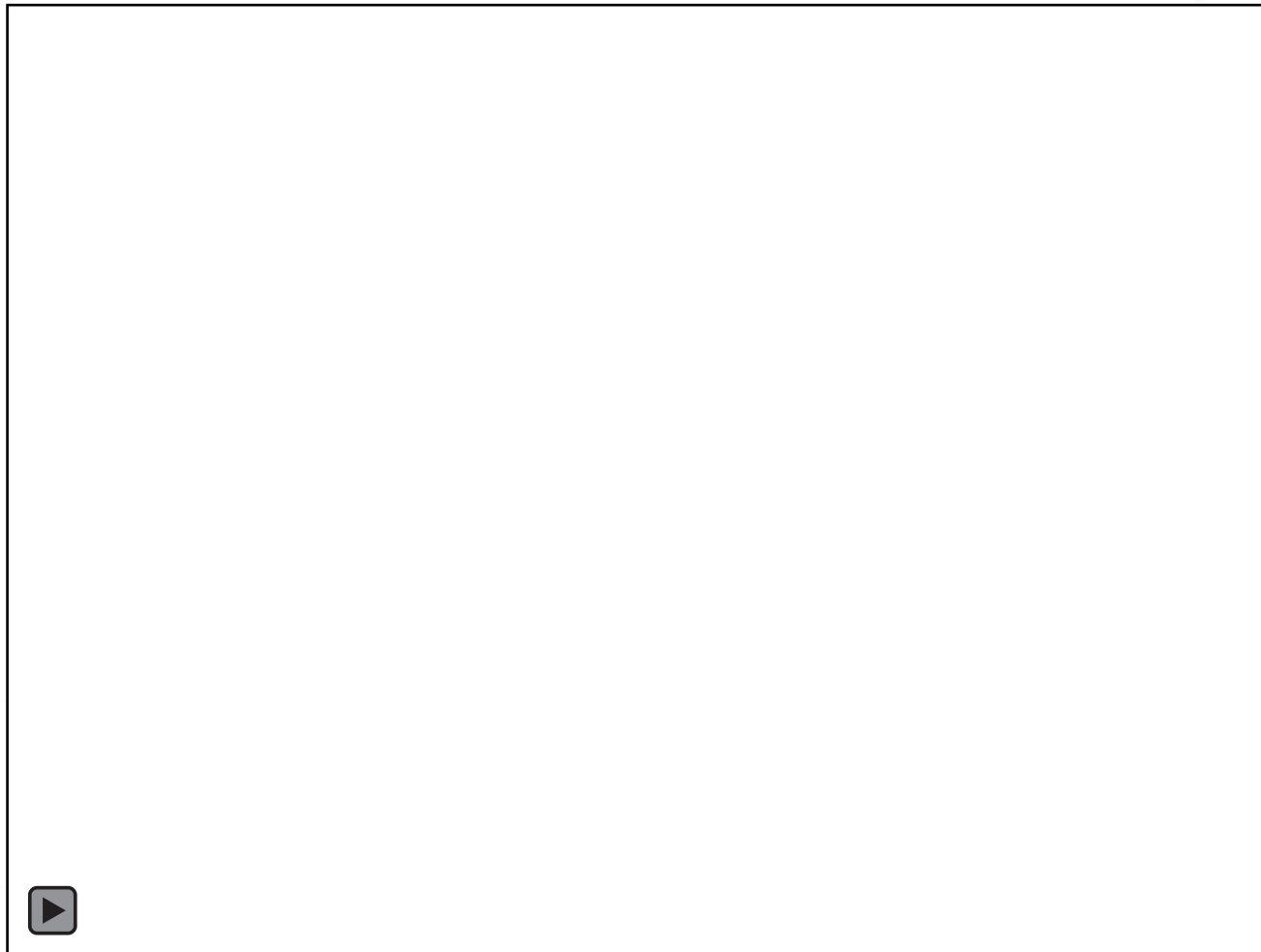
ZO – ZNAČAJNO OŠTEĆENJE

BR – BLIZU RUŠENJA



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Metode proračuna



Hvala na pozornosti!



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