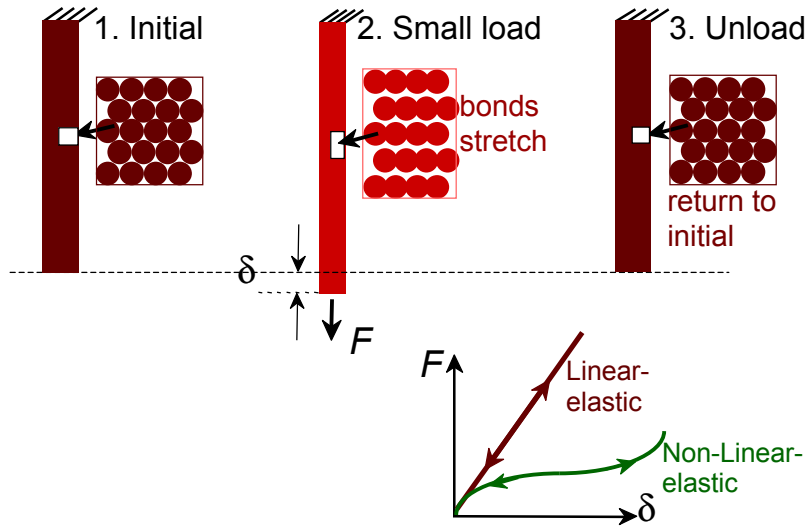
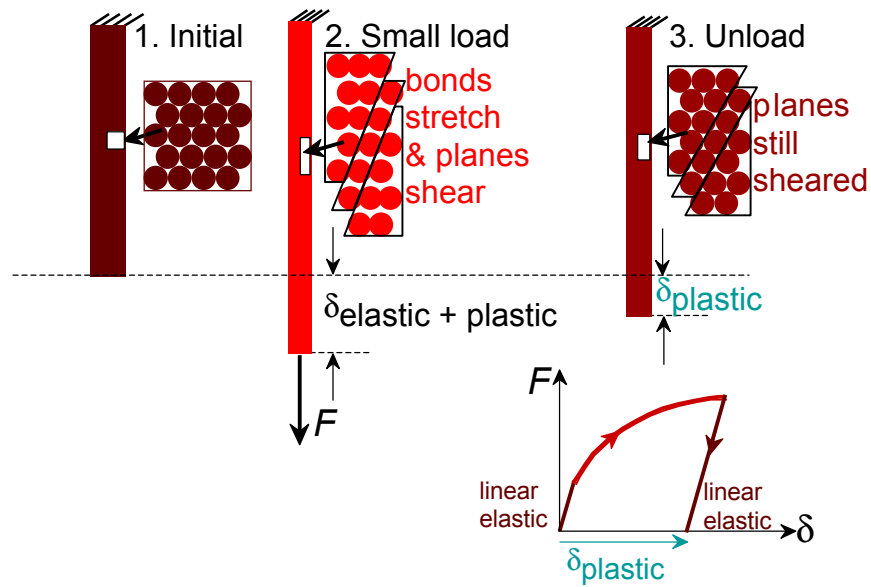


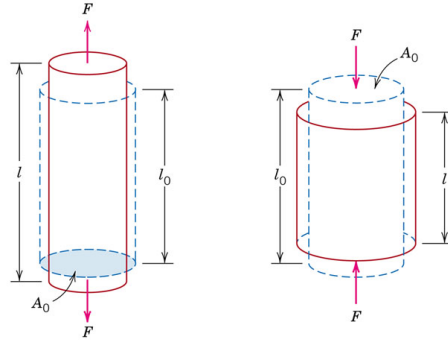
## Elastic Deformation



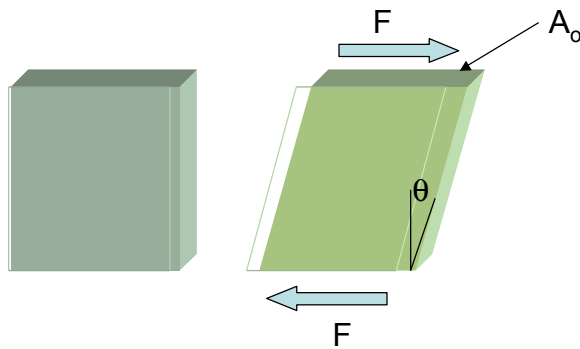
## Plastic Deformation (Metals)



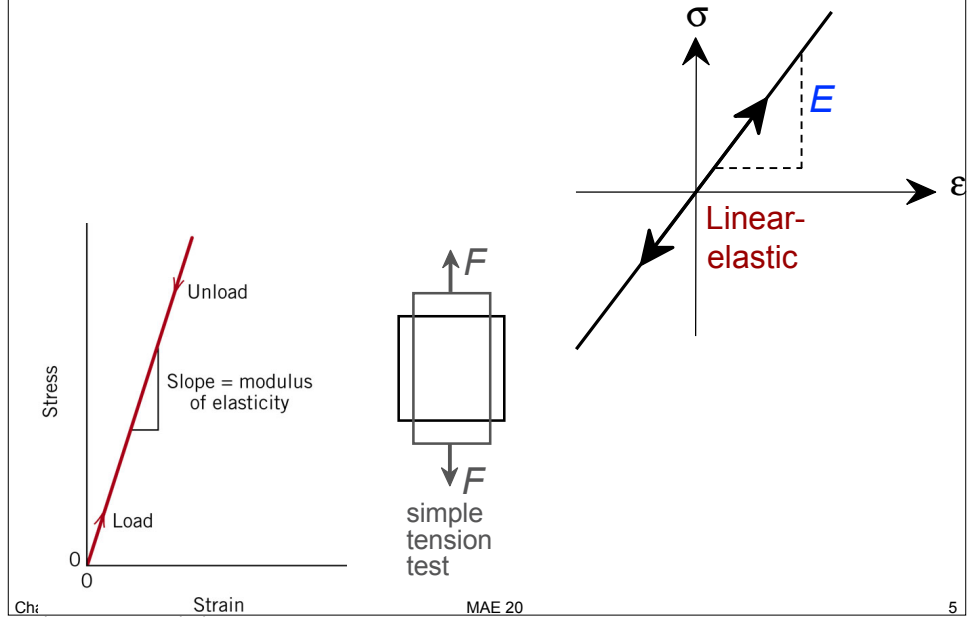
## Tension and compression tests



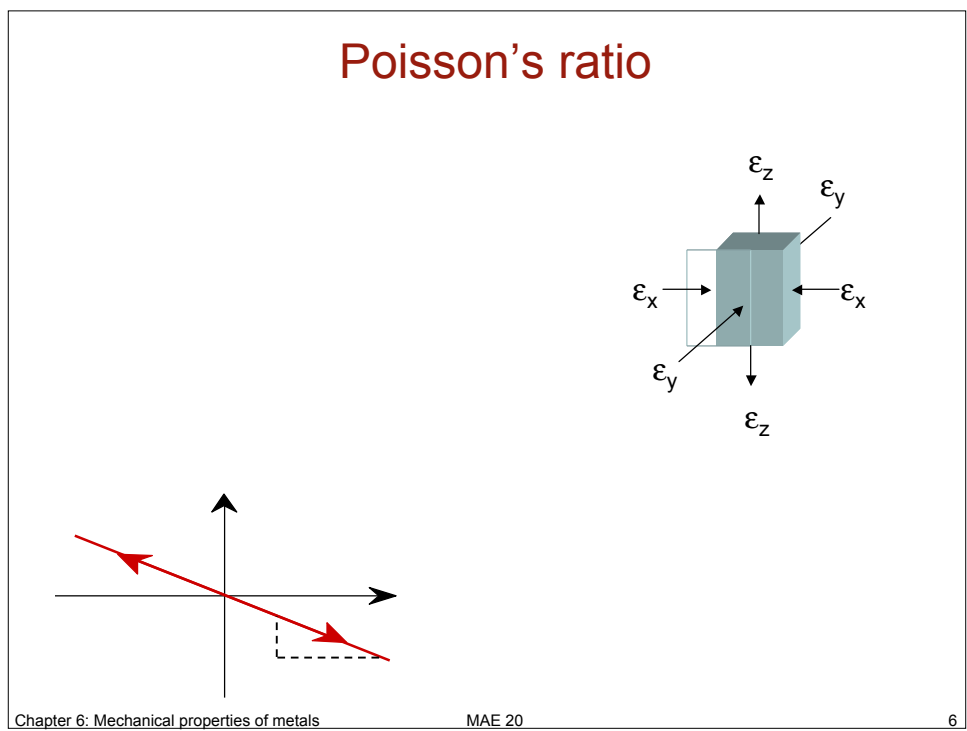
## Shear test



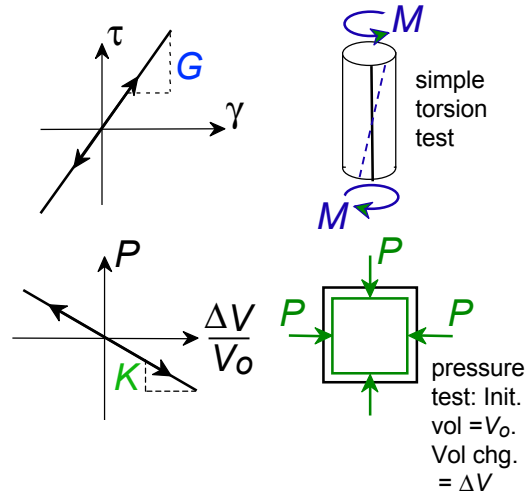
## Linear Elastic Properties



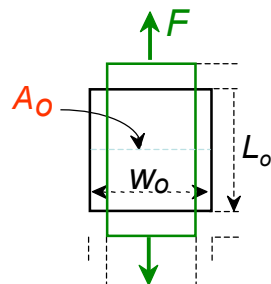
## Poisson's ratio



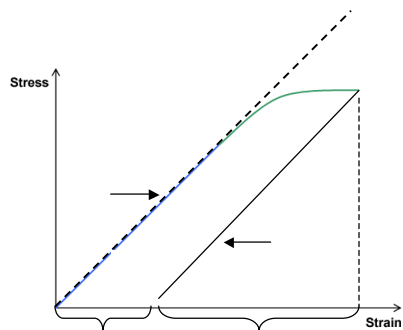
## Other Elastic Properties



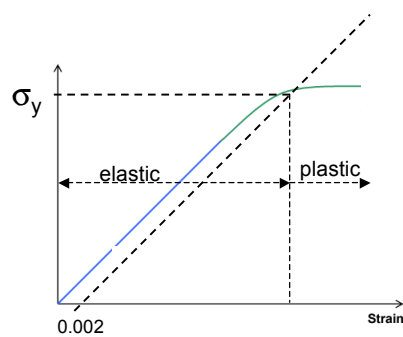
## Useful linear elastic relationships



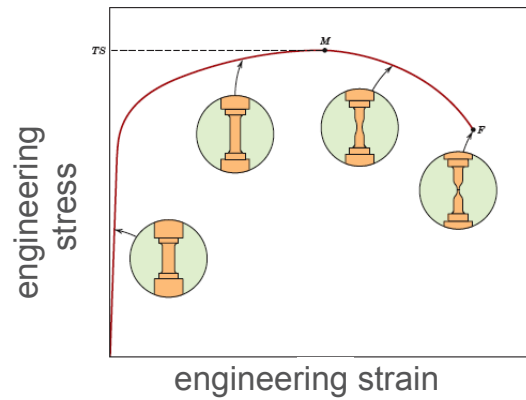
## Plastic deformation



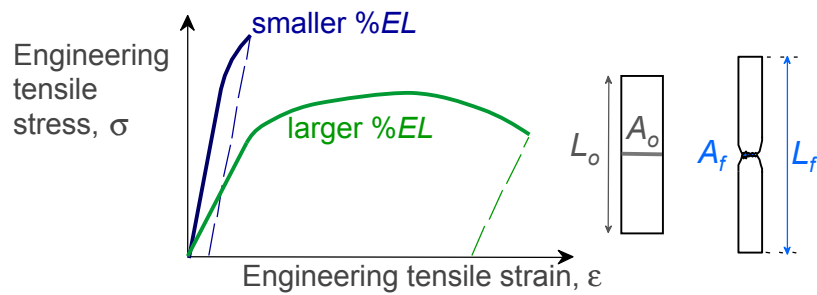
## Yield strength



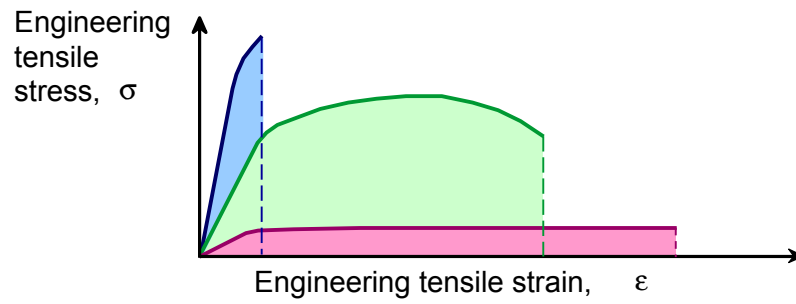
## Tensile strength, TS



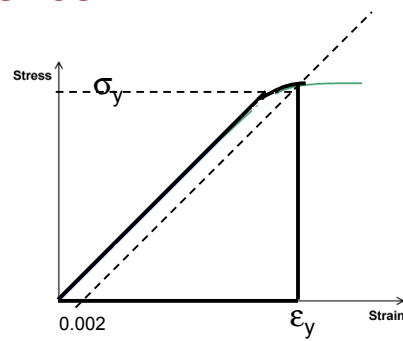
## Ductility



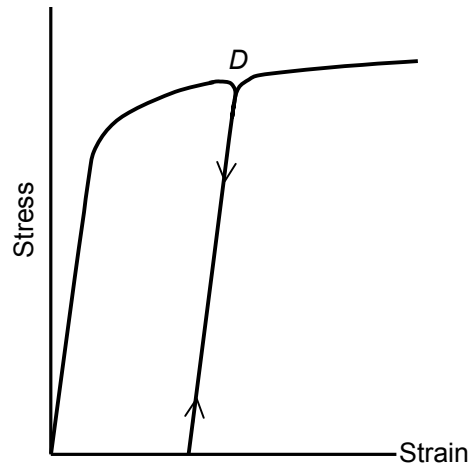
## Toughness



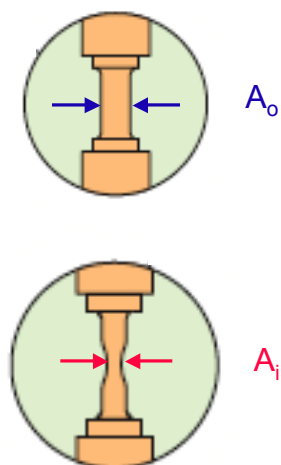
## Resilience



## Elastic Strain Recovery

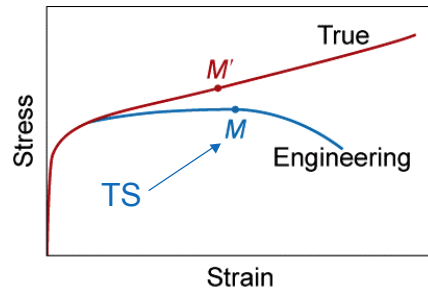


## True stress and true strain

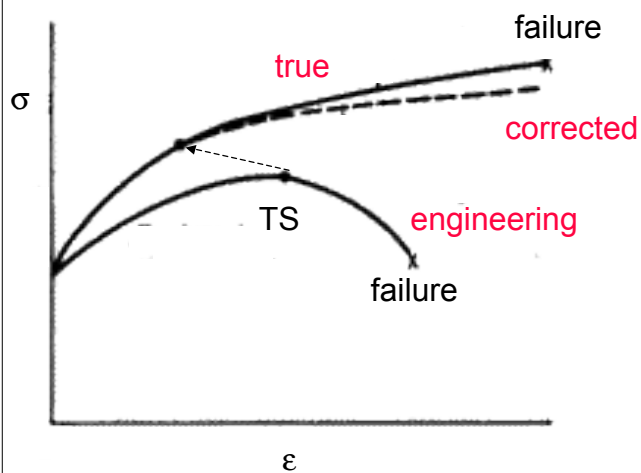




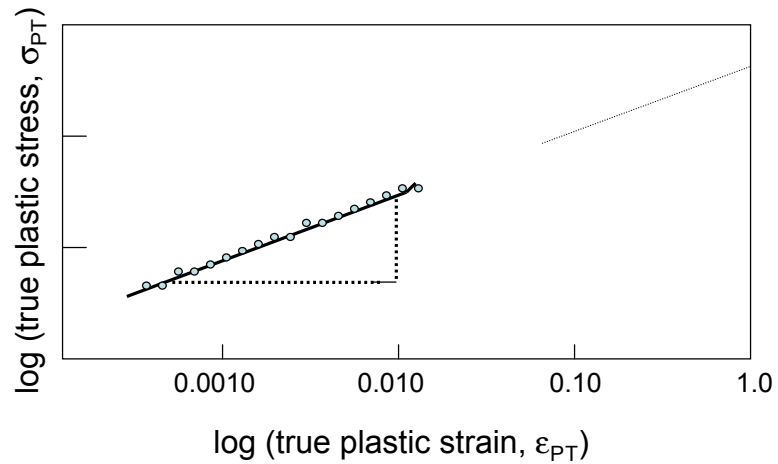
## True stress and true strain



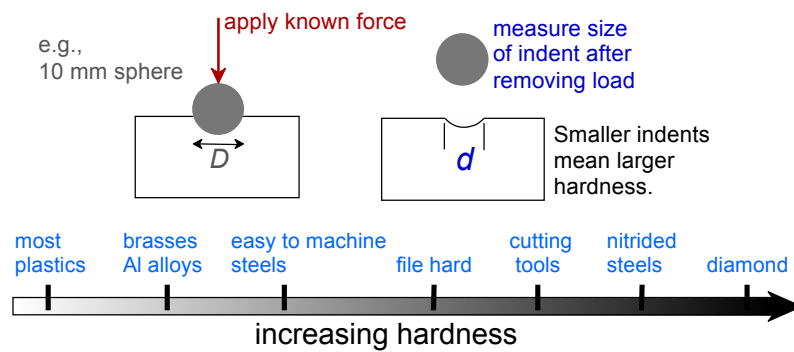
## Strain hardening



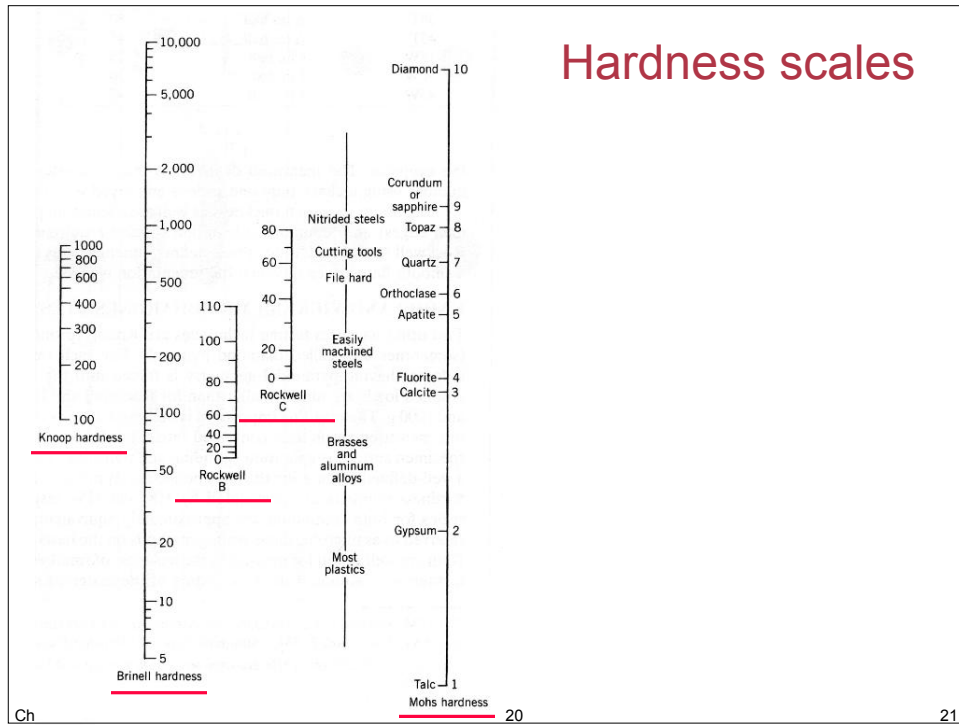
## log-log plot to determine K, n



## Hardness



## Hardness scales

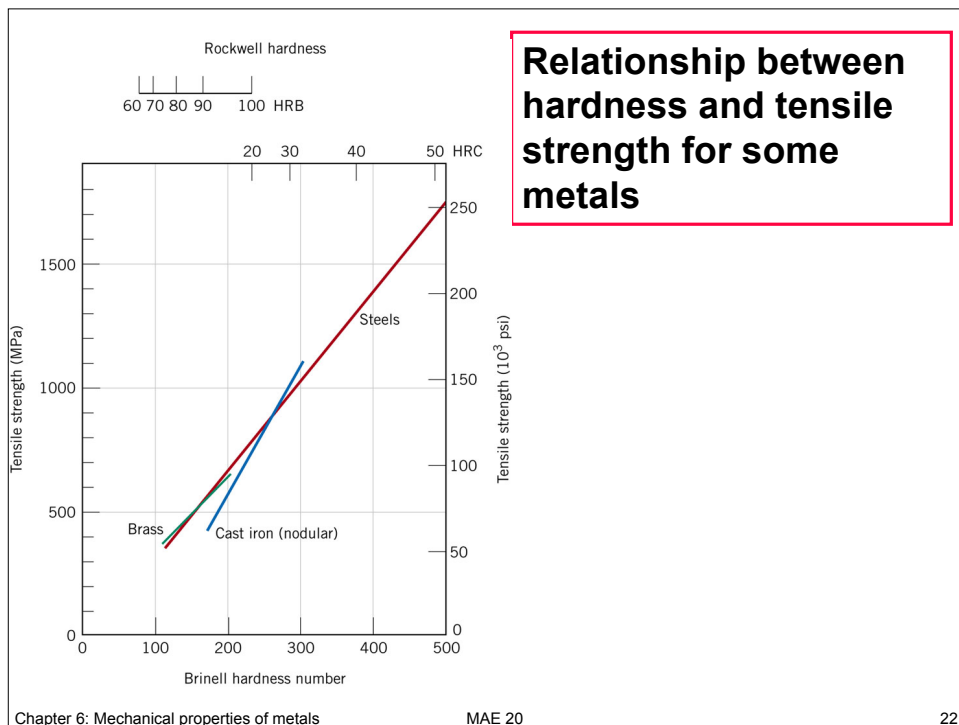


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## Relationship between hardness and tensile strength for some metals



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