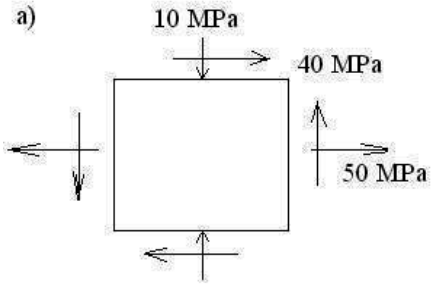
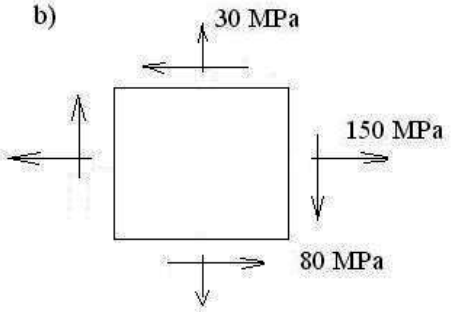
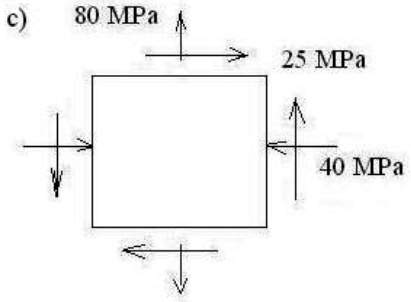
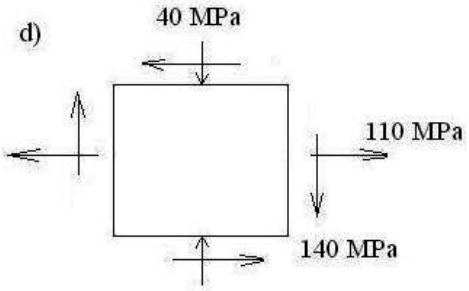
Lista de exercícios nº 8

1. Para cada estado de tensão abaixo, calcular o valor das tensões principais e do ângulo teta.









2. Determine se as situações abaixo provocam a falha do equipamento, de acordo com o Critério de escoamento de Tresca e o Critério de Von Mises.

a) σ_x = 320 MPa σ_y = 160 MPa τ_{xy} = 300 MPa σ_e = 630 MPa

b) σ_x = 300 MPa σ_y = 60 MPa τ_{xy} = 100 MPa σ_e = 300 MPa

c) σ_x = 80 MPa σ_y = 320 MPa τ_{xy} = -70 MPa σ_e = 300 MPa

d) σ_x = -180 MPa σ_y = -260 MPa τ_{xy} = 315 MPa σ_e = 600 MPa

e) σ_x = 48 MPa σ_y = 92 MPa τ_{xy} = 240 MPa σ_e = 500 MPa

f) σ_x = -280 MPa σ_y = 0 MPa τ_{xy} = -165 MPa σ_e = 400 MPa