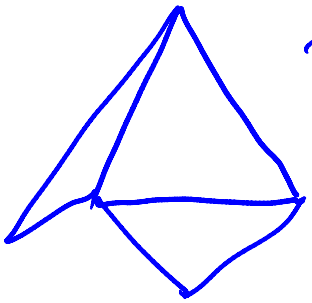
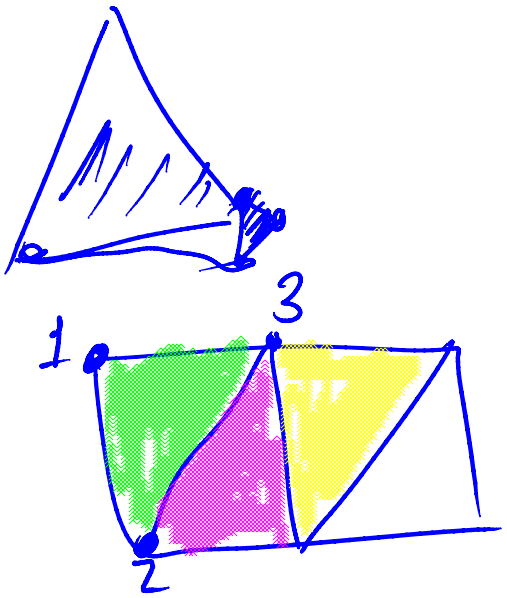


~ EQUILATERAL
OR
$30^\circ <$ ANGLE $< 120^\circ$



STEEP VARIATION IN STRESS VALUES BETWEEN ADJACENT ELEMENTS MAY INDICATE POOR MESH DISTRIBUTION

NODE 2 = AVG ( )

NODE 3 = AVG ( )

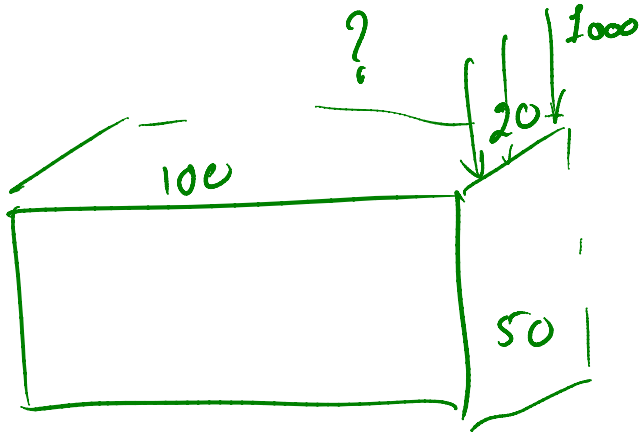
VON MISES (EQUIVALENT) STRESS

BASED ON OCTAHEDRAL SHEAR STRESS OR MAX. DISTORTION ENERGY:

$$\sigma = \sigma' = \sigma_e = \sigma_{V.MISES} = \sqrt{\frac{(\sigma_1 - \sigma_2)^2 + (\sigma_2 - \sigma_3)^2 + (\sigma_3 - \sigma_1)^2}{2}}$$

$$\sigma' = \sigma_e = \sigma_{V.MISES} = \sqrt{\frac{(\sigma_1-\sigma_2)^2+(\sigma_2-\sigma_3)^2+(\sigma_3-\sigma_1)^2}{2}}$$

2-D STRESS: $\sigma' = \sqrt{\sigma_x^2+\sigma_y^2-\sigma_x\sigma_y+3\tau_{xy}^2}$



$$I = \frac{20(50)^3}{12} \qquad M = 100(1000)$$

$$C = 25$$

$$\sigma = \frac{MC}{I} = \frac{100(1000)(25)12}{20(50)^3} = 12 \text{ MPa}$$

$$\delta = \frac{FL^3}{3EI} = \frac{1000(100)^3 12}{3(70\,000)(20)(50)^3} = 0.023 \text{ mm}$$