Class 11 Highlights By Jason Ott

In Class 11, we briefly reviewed eigenvalues and eigenvectors for a 3x3 tensor and how this process allows determination of the principal stresses and their orientation. We also briefly covered the significance of repeated eigenvalues in our solutions. We discussed tractions inside volumes (balance of tractions are representative of conservation of linear momentum-Newton's third law). The significance of the moment (torque) going to zero within a volume is that a non-zero torque in a material would indicate "churning" in the volume—this explains the symmetry of stress tensors.