

AME 538

Homework 11

Due: Wednesday, 20 September 2000, in class

1. Following the procedure using rotations outlined in the course notes, give a detailed verification that the most general form of the viscous stress tensor for an isotropic Newtonian fluid is

$$\tau_{ij} = 2\mu\partial_{(i}v_{j)} + \lambda\partial_k v_k \delta_{ij}.$$