Lecture 5
V 1
9-17-19

Takeaways:

Continuity eqn = micro mass bal

Navier-Stokes = micro momentum balance

Think about $\underline{v}$ in coord system:

$$\underline{v} = \begin{pmatrix} v_x \\ v_y \\ v_z \end{pmatrix}_{xyz}$$ (look for zeros!)

Wide flow is good to know

steady, nonsteady

① check algebra by checking unit

② substitute BC in final answer to check algebra

9-18-19
Lecture 5
U. 2

Takeaways:

Force on Wall $F_z = \int_0^L \int_0^W \tau_{xz}\Big|_{x=H} \, dy \, dz$

Steady = nothing changes w/ time

Leave pressure alone
(unless absolutely necessary to think about!!)

ρ = constant, same as "incompressible"

CHECK ALG:
1. units
2. B.C.