

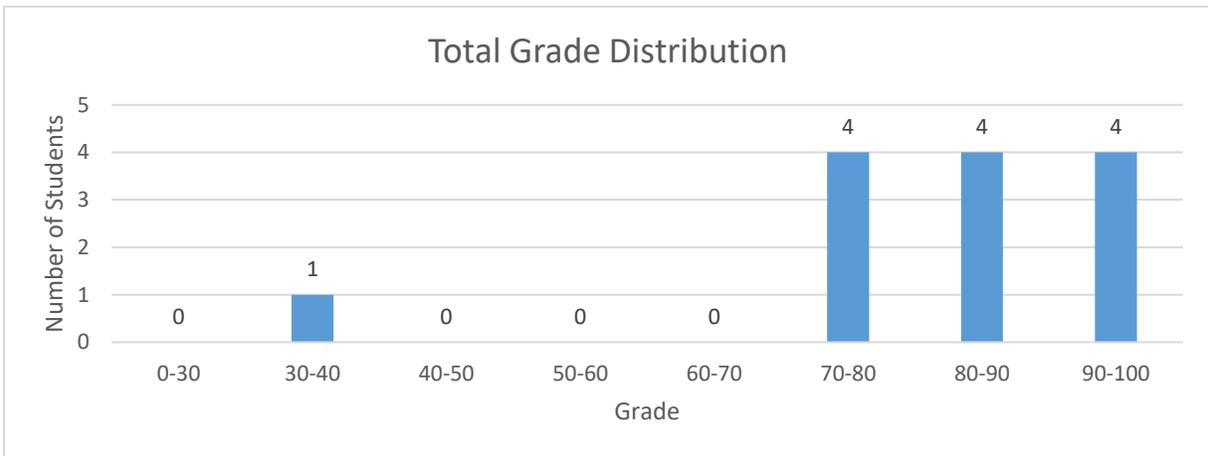
Exam 1 Report

10/14/2019

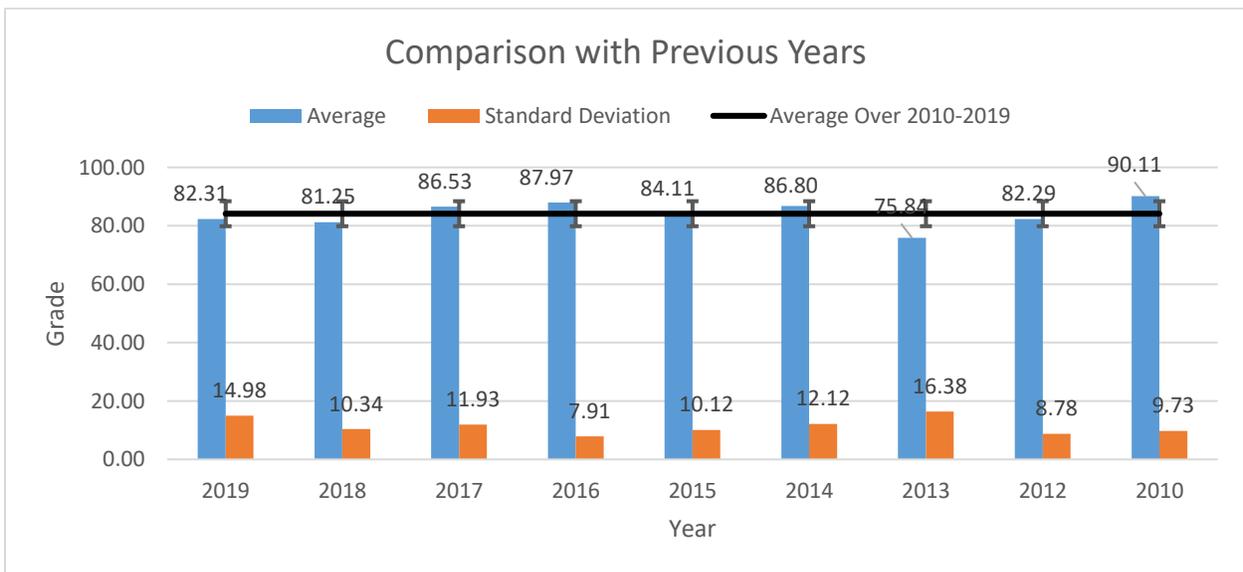
1. Summary

Total number of students	14
Attended	13
Missed	1
Number of problems	3
Average grade	82.31
Standard deviation of grades	14.98

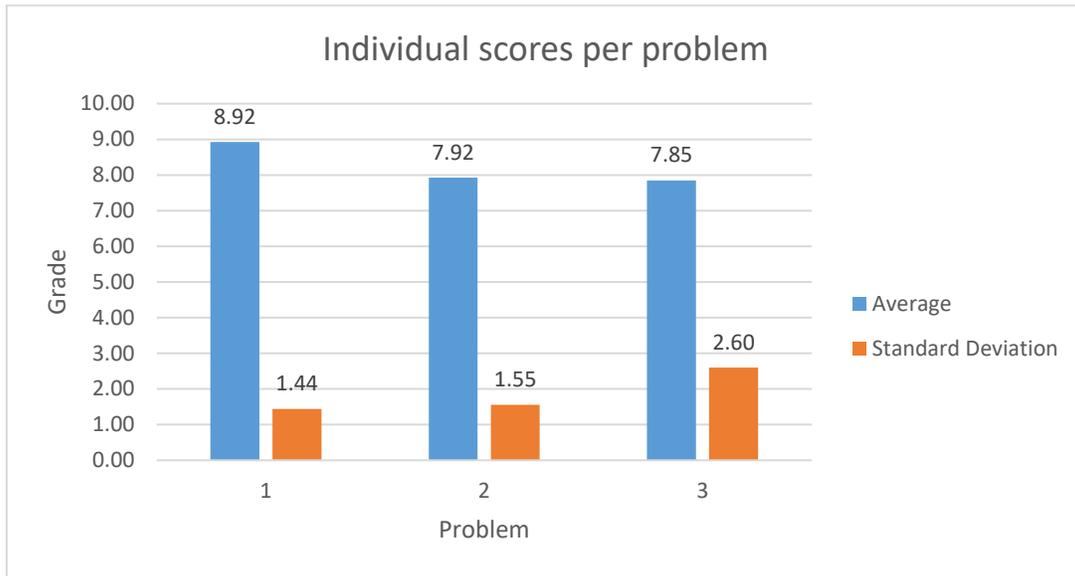
2. Grade distribution



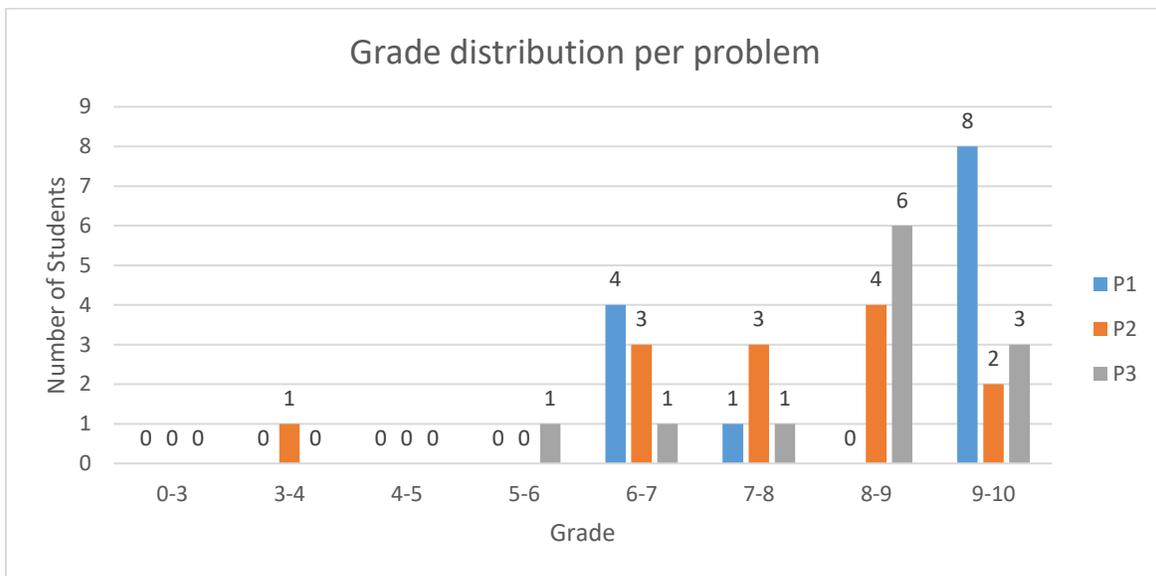
3. Comparison with past years



4. Individual problem breakdown



5. Grade distribution per problem



6. Comments

PROBLEM 1

- Some of students used Momentum equation incorrectly.
- One student confused the Gage pressure with Hydrostatic pressure in Bernoulli's Equation.
- Some of students could not use Momentum equation to get Velocity.

PROBLEM 2

- Several students Missed pressure Force for calculating Moment.
- Some of students did not use correct moment arm.
- One student multiplied density to get Moment $\vec{M} = \rho(\vec{r} \times \vec{F})$
- Some of students couldn't use the continuity equation and calculate wrong Velocity.
- Some of students indicated wrong sign at pressure term in Momentum equation.

PROBLEM 3

- One student missed the pressure gradient, and another student used gravity term rather than Pressure term in N-S Equation.
- One student couldn't neglect the convection(Non-linear) term which should be canceled out with the fully developed assumption.
- One student used wrong boundary condition.
- Several students couldn't integrate $u(y)$ correctly to get flow rate \dot{Q}
- Some of student couldn't use the shear stress formula $\tau_w = \mu \frac{du}{dy}$