

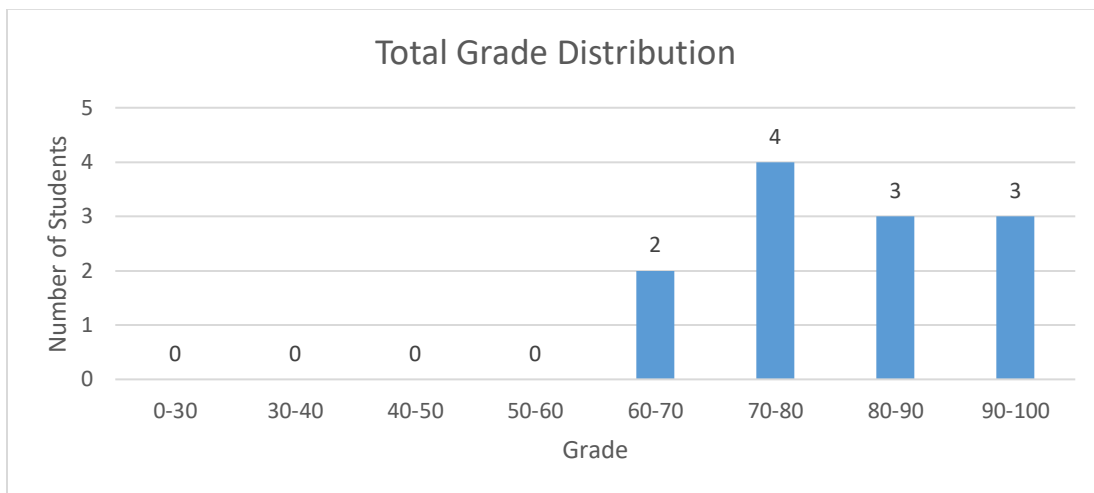
# Exam 1 Report

10/11/2010

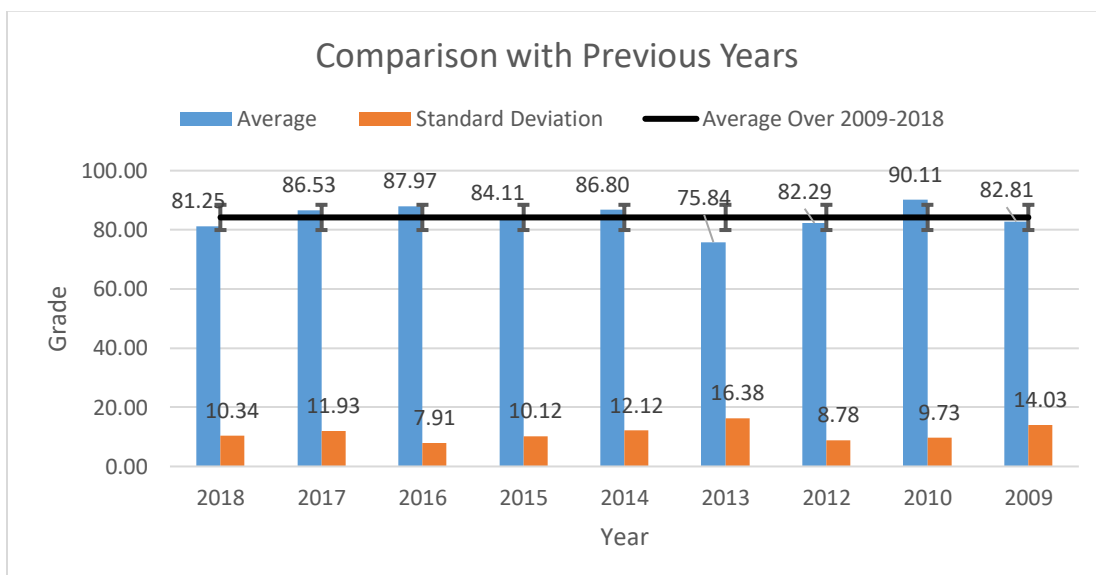
## 1. Summary

Total number of students	12
Attended	12
Missed	0
Number of problems	3
Average grade	81.25
Standard deviation of grades	10.34

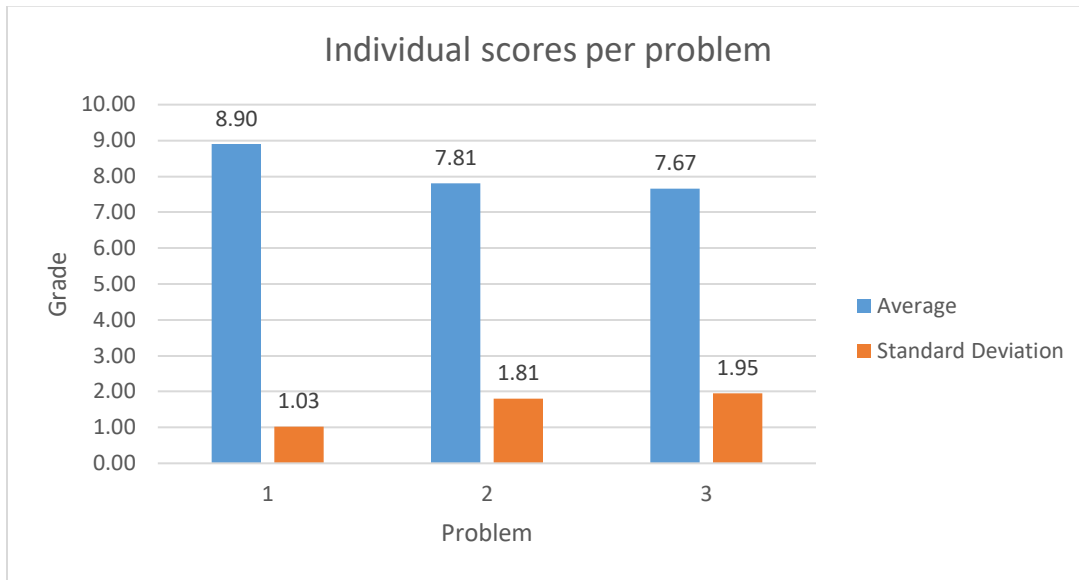
## 2. Grade distribution



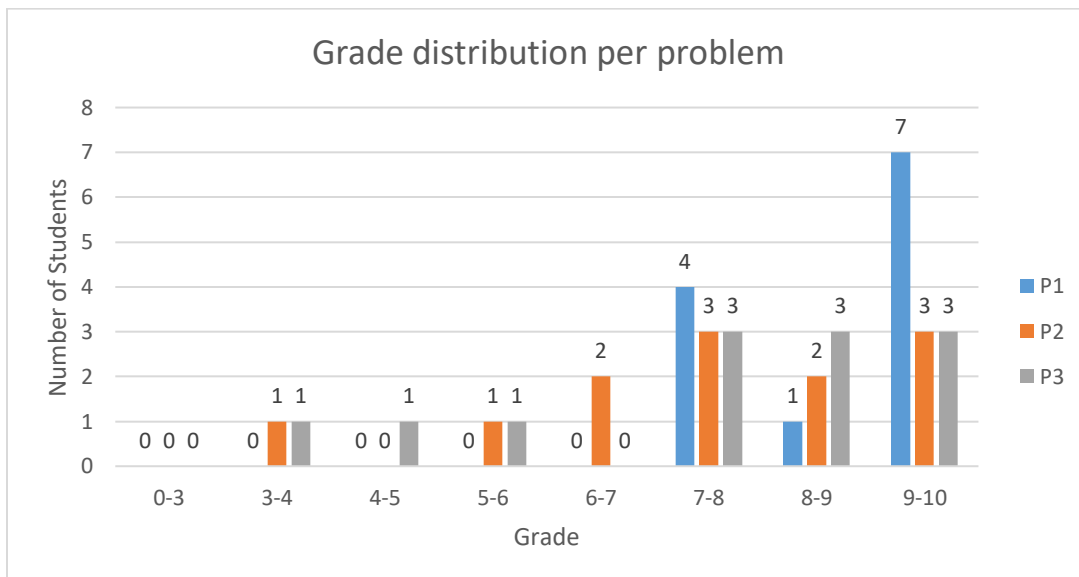
## 3. Comparison with past years



#### 4. Individual problem breakdown



#### 5. Grade distribution per problem



## 6. Comments

### PROBLEM 1

- Some student made calculation mistakes when calculating pi terms
- Some student made unit conversion mistake
- Some students assumed  $\pi_1 = \pi_2$  instead of  $\pi_1 = \phi(\pi_2)$
- Some students mixed the pipe diameter with sphere diameter

### PROBLEM 2

- Many students neglected the hydrostatic force at section 1
- Some students used wrong depth for calculating the mean pressure a section 1
- Some student made mistakes when calculating momentum flux (i.e. not having  $\sin(20)$  or wrong sign)

### PROBLEM 3

- Some students applied the boundary conditions incorrectly (i.e  $u(0)=0$ )
- Some student made wrong assumptions when applying momentum equations (i.e. not assuming  $v=0$ , not neglecting gravity for y-momentum)
- Some students did not apply y-momentum to show  $p=p(x)$
- Some students did not know how to calculate flow rate from given velocity function