

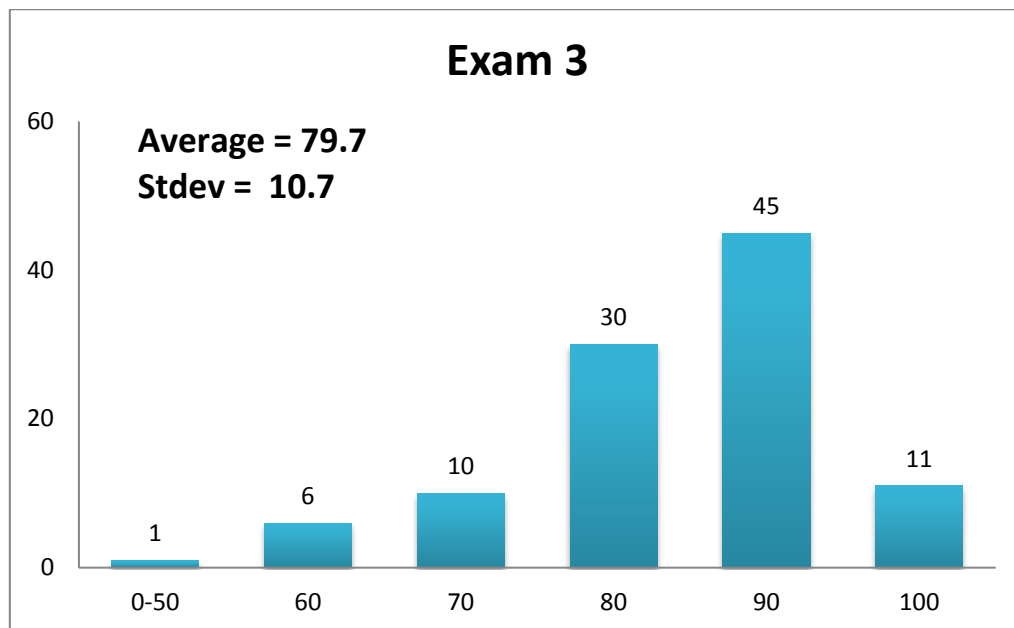
# Report of Exam 3

## 12/17/2015

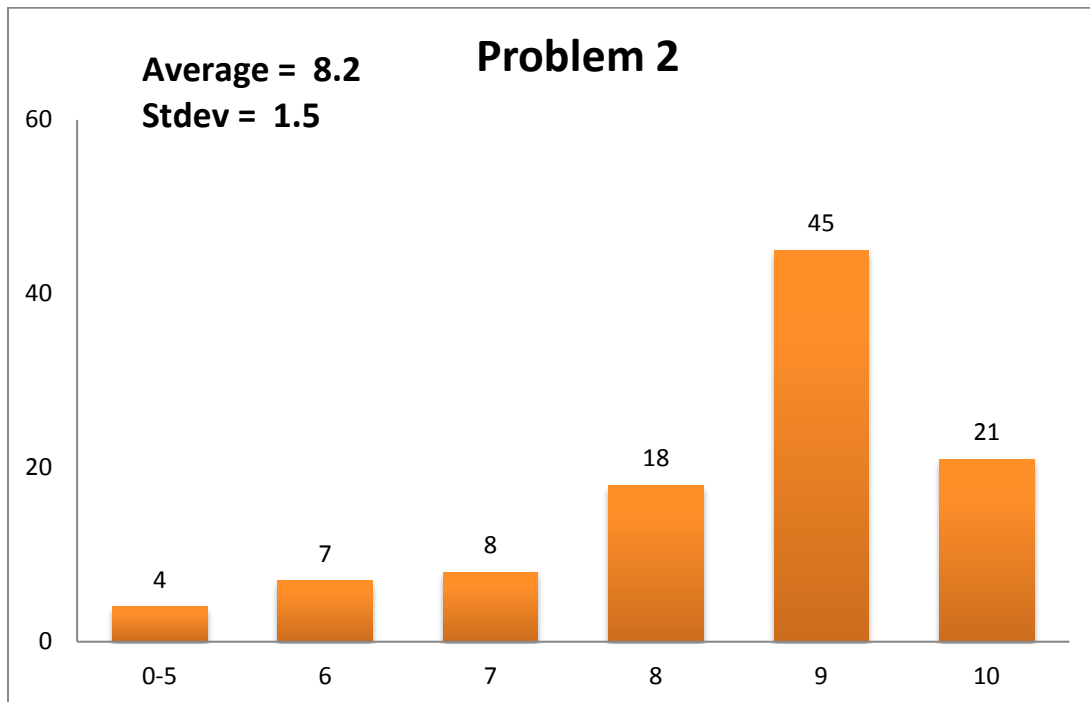
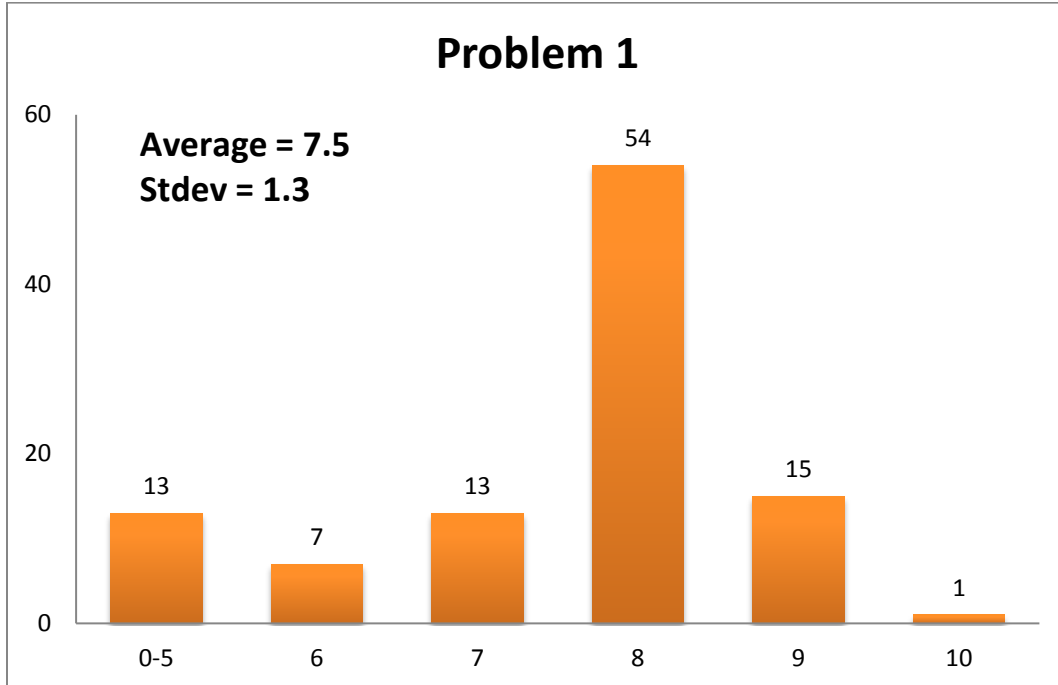
### 1. Summary

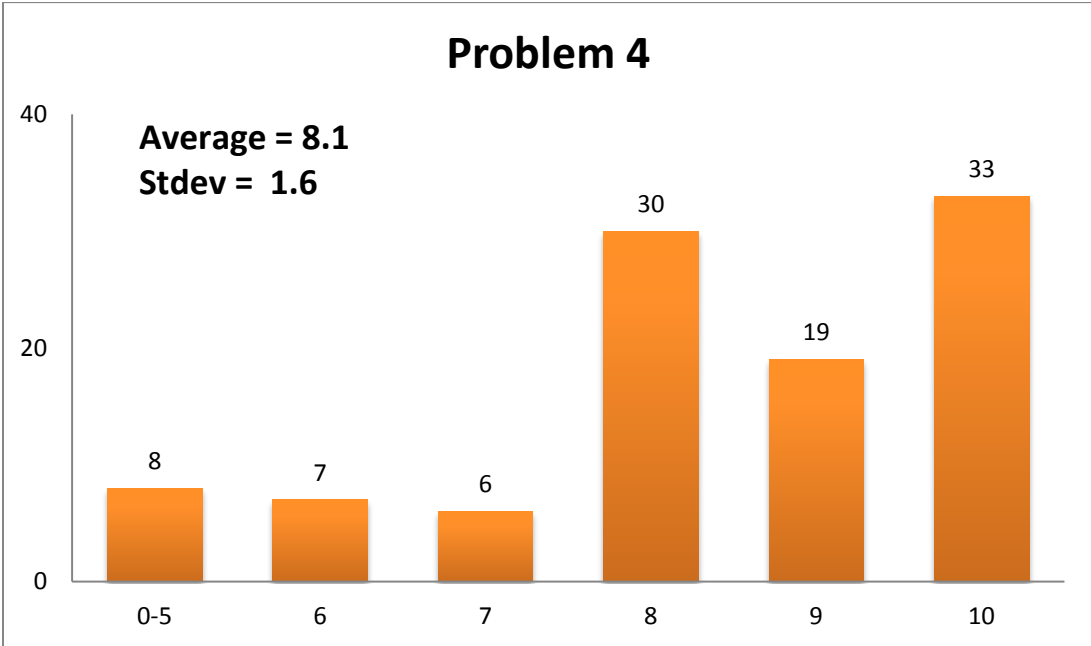
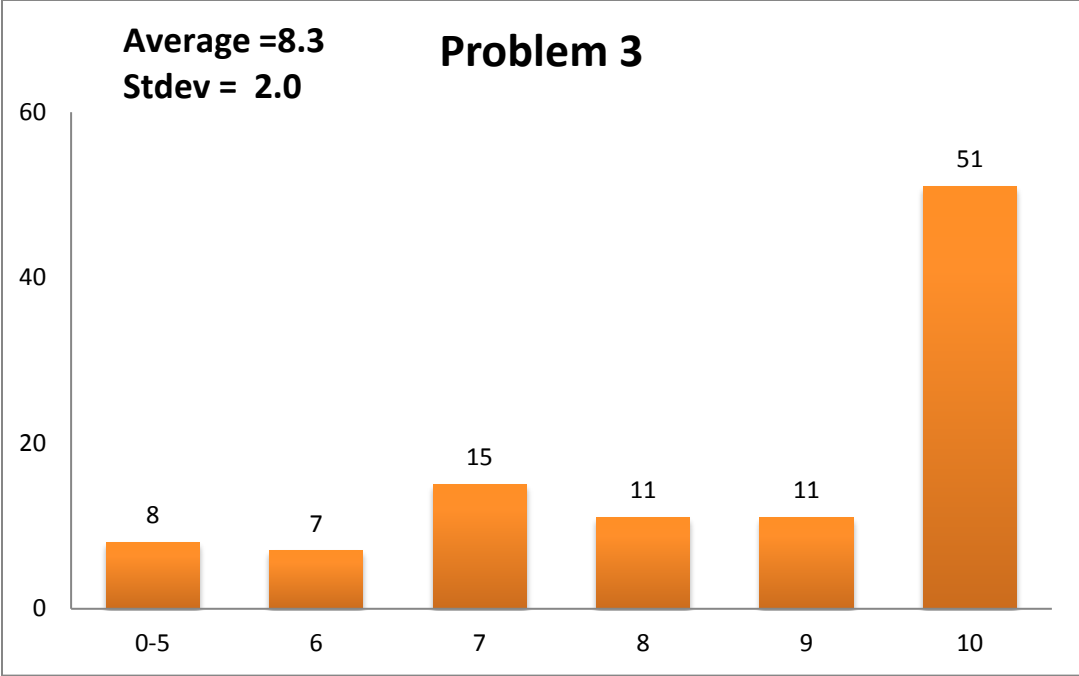
	Number of Students
Total	105
Attended	103
Missed	2
Makeup	0

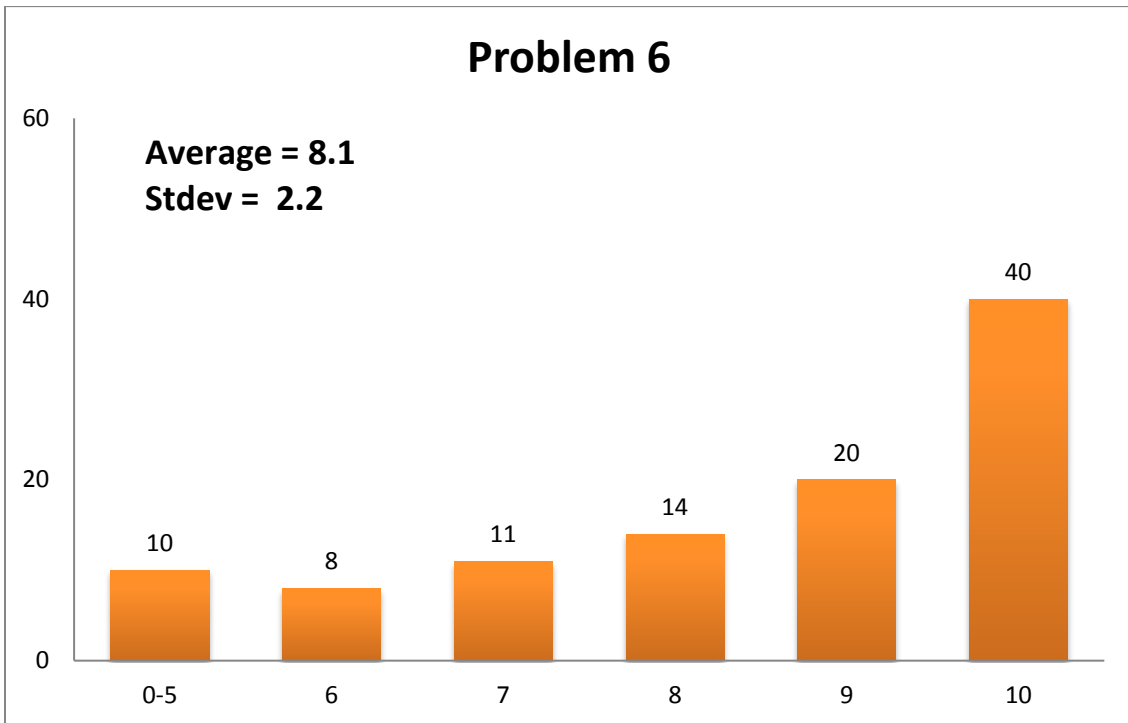
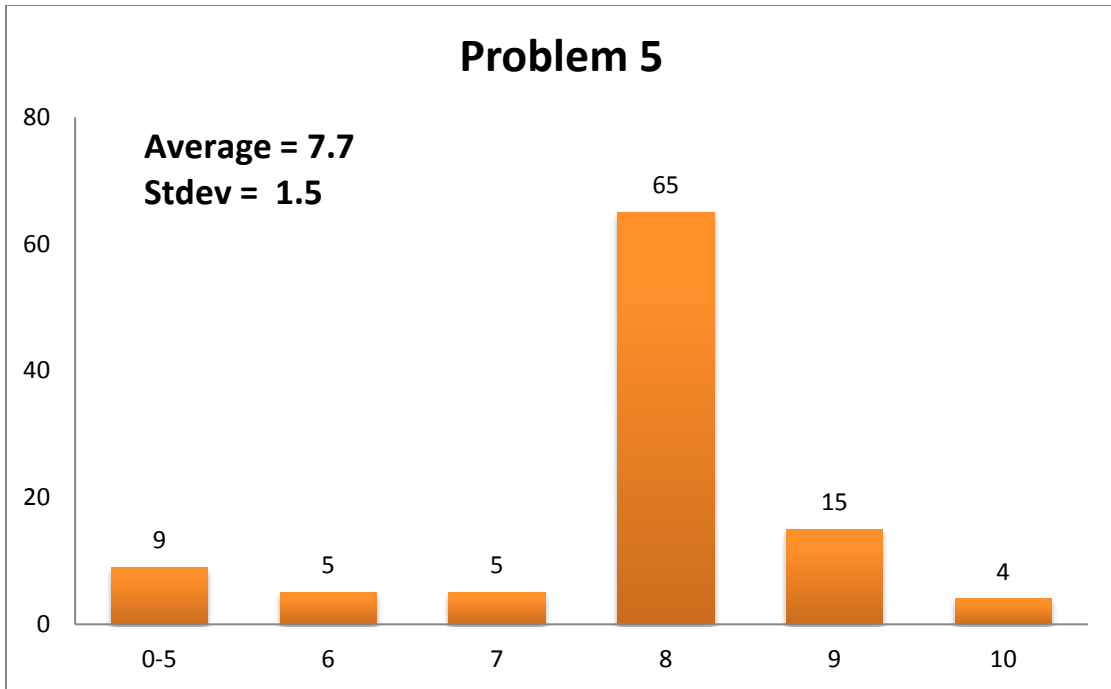
### 2. Overall distribution

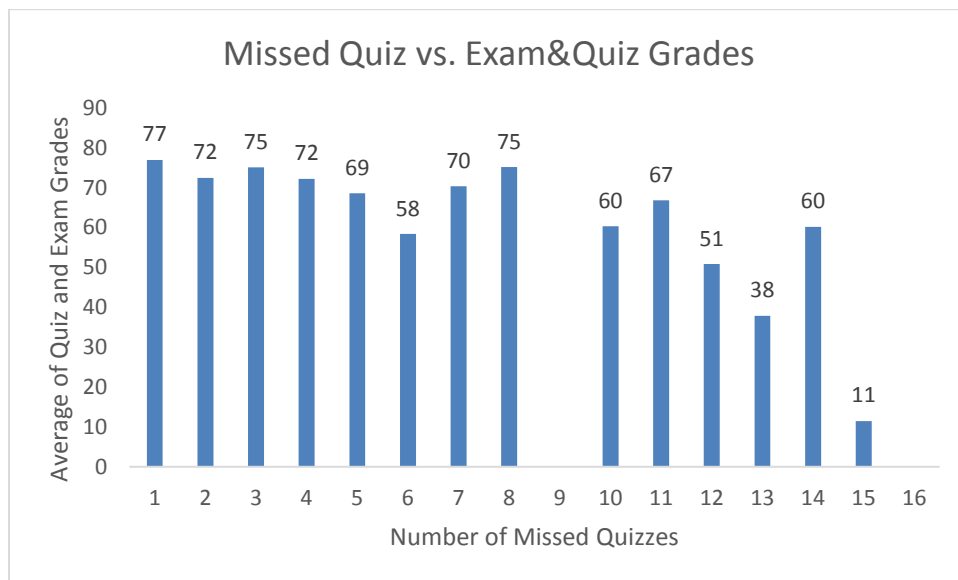
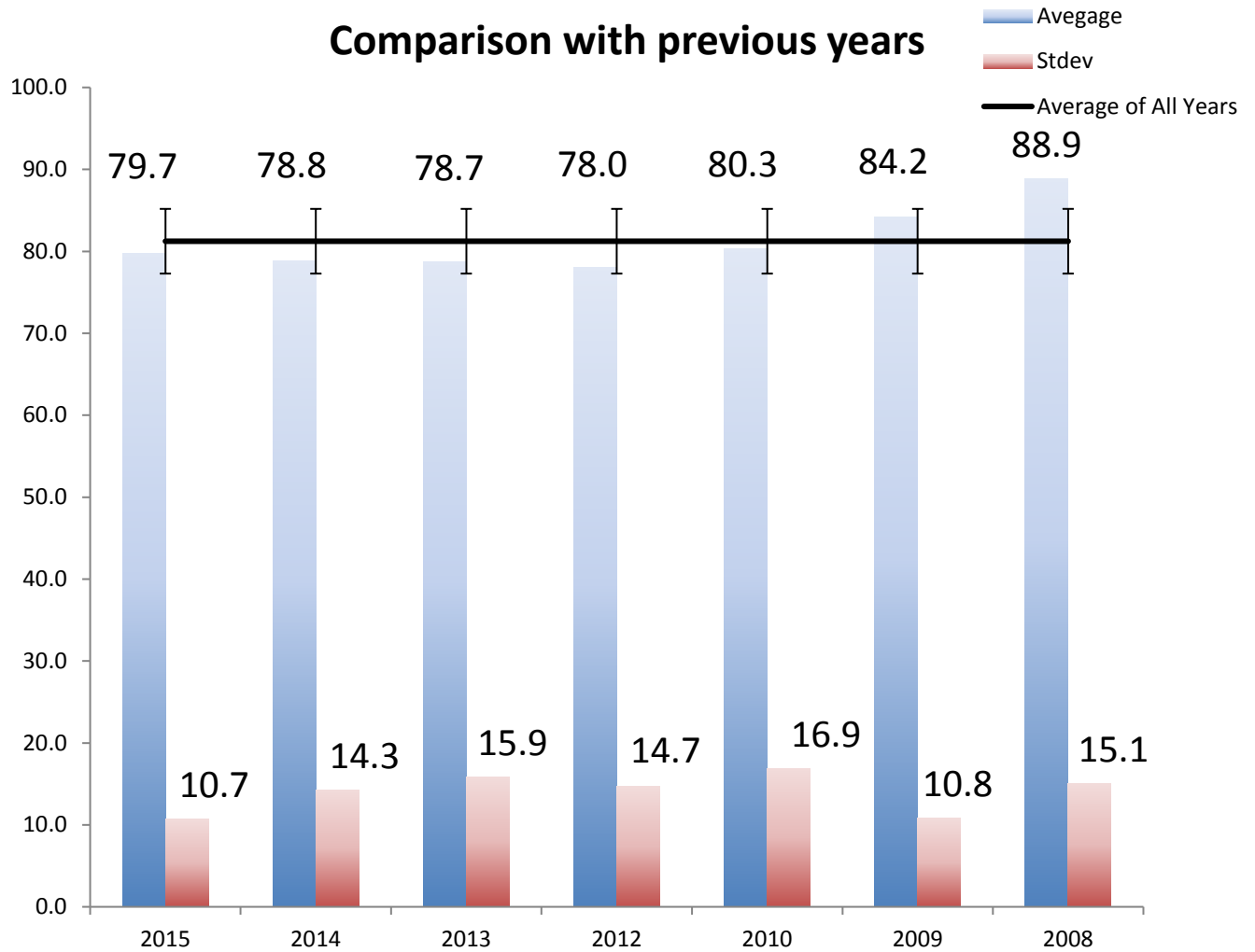


### 3. Distribution for each problem









## 4. Common mistakes

Problem 1:

- Wrong calculation of volume for the buoyance force.
- Wrong area calculation for the horizontal component of the hydrostatic force

Problem 2:

- Wrong signs for the momentum equation

Problem 3:

- Wrong dimension for the terms used in the pi parameters
- Some students set two different pi terms to each other (i.e.  $\Delta p / \rho \omega^2 D^2 = Q / \omega D^3$ )

Problem 4:

- Mistakes in simplifying the energy equation
- Some students were not able to solve the problem iteratively

Problem 5:

- Wrong area for drag calculation (some students used one side of plate instead of both sides)
- Using wrong length scale for Reynolds number calculation

Problem 6:

- Using wrong property values for weight force calculation
- Some students try to use equation from their cheat sheet for Cd estimation instead of using given experimental data.