

## MAKING THE GRADE

### Calculating Grades with Weighted Categories

<b>Daily Work</b>	<b>20%</b>
<b>Exams</b>	<b>30%</b>
<b>Portfolio</b>	<b>30%</b>
<b>Final Exam</b>	<b>20%</b>

To date only grades within the **Daily Work** and **Exams** categories have been earned.

**Average of the Daily Work is 80%**  
**Average of the Exams is 99%** (Contains only the grade from Exam 1)

**Overall Course Average is 91.4% A**

For Scenario 1 and 2: The second exam is given, which is included in the “Exams” category. The grade on the second Exam is higher than the course average and the result is that the course average falls.

For Scenario 3 and 4: The homework assignment is given, which is included in the “Daily Work” category. The grade on the second homework assignment is lower than the course average and the result is that the course average rises.

#### Scenario 1:

Exam 1 in the “Exams” category is worth 100 points.

Exam 2 in the “Exams” category is worth 100 points.

The student earns 92/100 or **92%** on Exam 2: Average “Exams” = 95.5%

Result:

Overall Course Average = **89.3% B (a decrease of 2.1%)**

#### Scenario 2

Exam 1 in the “Exams” category is worth 200 points.

Exam 2 in the “Exams” category is worth 400 points.

The student earns 368/400 or **92%** on Exam 2: Average “Exams” = 94.3%

Result:

Overall Course Average = **88.6% B (a decrease of 2.8%)**

In both cases the average earned on the second exam is higher than the overall course average, and the result is that the overall course average goes down. It is not too difficult (at least for me) to logically see that the average on Exam 2 is lower than the average in the “Exams” category, which results in the average on the “Exams” category going down after Exam 2 is included. This results in a lower overall course average.

## MAKING THE GRADE

To date only grades within the Daily Work and Exams categories have been earned.

Average of the Daily Work is	80% (Contains only the grade from Homework 1)
Average of the Exams is	99%
Overall Course Average is	91.4% A

For Scenario 3 and 4: The homework assignment is given, which is included in the “Daily Work” category

Scenario 3:

Homework 1 in the “Daily Work” category is worth 100 points.  
Homework 2 in the “Daily Work” category is worth 100 points.

The student earns 85/100 or 85% on Homework 2: Average “Daily Work” = 82.5%

Result:

Overall Course Average = 92.4% A (an increase of 1%)

Scenario 2

Homework 1 in the “Daily Work” category is worth 200 points.  
Homework 2 in the “Daily Work” category is worth 400 points.

The student earns 360/400 or 90% on Homework 2: Average “Daily Work” = 85.0%

Result:

Overall Course Average = 93.4% A (an increase of 2%)

In both cases the average earned on the second homework assignment is lower than the overall course average, and the result is that the overall course average goes up. It is not too difficult (at least for me) to logically see that the average on Homework 2 is higher than the average in the “Daily Work” category, which results in the average on the “Daily Work” category going up after Homework 2 is included. This results in a higher overall course average.

**Making the Grade calculates the overall average by:**

1. Calculating a percentage on each category by:
  - a. Adding the actual number of points earned on each assignment in a category = x
  - b. Adding the possible number of points earned on each assignment in a category = y
  - c. Calculating the category average  $x/y$  (creating a % earned for the category)
2. Multiplies the category average (% earned for the category) times the % weight of the category =  $z_i$
3. Calculates the overall average  $\sum z_i$