

# THE FOUR DIFFERENT “AVERAGE MODES”

Consider the following gradebook:

	Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade
HW 1	10	10	100%	Quiz 1	50	50	100%	Test 1	80	100	80%
HW 2	9	10	90%	Quiz 2	42	50	84%	Test 2	94	100	94%
HW 3	15	20	75%	Quiz 3	48	50	96%	Test 3	180	200	90%
HW 4	4	5	80%								
<b>Totals</b>	<b>38</b>	<b>45</b>		<b>Totals</b>	<b>140</b>	<b>150</b>		<b>Totals</b>	<b>354</b>	<b>400</b>	

Notes: There are three grading categories: HW, Quiz, Tests. There are four HW grades. HW 3 is worth 20 points, or twice as much as HW 1 and HW 2, and 4 times as much as HW 4. There are three quiz grades, each of equal value. There are three test grades. Test #3 is worth twice as much as Test 1 and Test 2. In this gradebook, assignments are given more or less weight using POINTS.

## Total Points Only:

Teacher DOES NOT establish how much weight each category will contribute to the marking period average. The weighting can be identified after the fact, by determining how many points of each type exist. Assignments are NOT converted into percentages = NUMBER OF POINTS MATTERS.

	Total HW Pts Earned	Total HW Pts Possible		Total Quiz Pts Earned	Total Quiz Pts Possible		Total Test Pts Earned	Total Test Pts Possible
HW	38	45	Quiz	140	150	Test	354	400

Marking period average using **total points**:  $\frac{\text{Total Points Earned}}{\text{Total Points Possible}} = \frac{38+140+354}{45+15+400} = \frac{532}{595} = \mathbf{89.41\%} = \mathbf{B+}$

In our example, HW is worth 7.6% of the MP grade (45/595); Quizzes are worth 25.2% (150/595); and Tests are worth 67.2% (400/595)

## Category Total Points:

Teacher DOES establish how much weight each category will contribute to the marking period average. Assume HW = 25% of MP grade; Quiz = 25% of MP grade; and Tests = 50% of MP grade for a total of 100 percentage points possible.

Assignments are NOT converted into percentages = NUMBER OF POINTS MATTERS.

	Pts Earned	Pts Possible	HW Average		Pts Earned	Pts Possible	Quiz Average		Pts Earned	Pts Possible	Test Average
HW	38	45	38/45	Quiz	140	150	140/150	Test	354	400	354/400
25%			84.44%	25%			93.33%	50%			88.5%

The category average is calculated using total points within the category ( $\frac{\text{Total Points Earned}}{\text{Total Points Possible}}$ ).

Marking period average using **category total points**:  $\mathbf{88.69\%} = \mathbf{B+}$

(HW category average x HW category weighting)  $84.44 \times 25\%$   
 + (Quiz category average x Quiz category weighting)  $93.33 \times 25\%$   
 + (Test category average x Test category weighting)  $88.50 \times 50\%$

\*\*\*\*Warning, if you assign weight to a category and only have 1 assignment in that category, then that one assignment will be worth the amount of the category in the marking period average. For example, if tests are worth 50% of the marking period grade and you only have one test in a marking period, that one test counts as 50% of the marking period grade. If you have no assignments in a category, then the “value” of that category’s points will be distributed proportionally among the other categories. For example, if there are no HW grades in the sample above, then quizzes would be worth 33.3% and tests would be worth 66.7% of the marking period grades.

# THE FOUR DIFFERENT “AVERAGE MODES” – CONTINUED

Consider the following gradebook:

	Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade
HW 1	10	10	100%	Quiz 1	50	50	100%	Test 1	80	100	80%
HW 2	9	10	90%	Quiz 2	42	50	84%	Test 2	94	100	94%
HW 3	15	20	75%	Quiz 3	48	50	96%	Test 3	180	200	90%
HW 4	4	5	80%								
<b>Totals</b>	<b>38</b>	<b>45</b>	<b>84.4%</b>		<b>140</b>	<b>150</b>	<b>93.3%</b>		<b>354</b>	<b>400</b>	<b>88.5%</b>

Notes: There are three grading categories: HW, Quiz, Tests. There are four HW grades. HW 3 is worth 20 points, or twice as much as HW 1 and HW 2, and 4 times as much as HW 4. There are three quiz grades, each of equal value. There are three test grades. Test #3 is worth twice as much as Test 1 and Test 2. In this gradebook, assignments are given more or less weight using POINTS.

## Categories Only (weighted categories):

Teacher DOES establish how much weight each category will contribute to the marking period average.

Assume HW = 25% of MP grade; Quiz = 25% of MP grade; and Tests = 50% of MP grade for a total of 100 percentage points possible.

Assignments ARE converted into percentages = NUMBER OF POINTS DOESN'T MATTER.

Each assignment within a category is worth the same weight, regardless of the number of points.

	Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade		Pts Earned	Pts Possible	Assignment grade
HW 1	10	10	100%	Quiz 1	50	50	100%	Test 1	80	100	80%
HW 2	9	10	90%	Quiz 2	42	50	84%	Test 2	94	100	94%
HW 3	15	20	75%	Quiz 3	48	50	96%	Test 3	180	200	90%
HW 4	4	5	80%								
<b>AVG:</b>			<b>86.25%</b>	<b>AVG:</b>			<b>93.33</b>	<b>AVG:</b>			<b>88%</b>

Category average is calculated by averaging the assignments within the category ( $\frac{\text{Grade 1} + \text{Grade 2, etc.}}{\text{Number of grades}}$ ).

Marking period average using **categories only**: = **88.89%** = **B+**

$$\begin{aligned}
 & (\text{HW category average} \times \text{HW category weighting}) && 86.25 \times 25\% \\
 & + (\text{Quiz category average} \times \text{Quiz category weighting}) && 93.33 \times 25\% \\
 & + (\text{Test category average} \times \text{Test category weighting}) && 88.00 \times 50\%
 \end{aligned}$$

## Weighted Categories AND Assignments:

Teacher DOES establish how much weight each category will contribute to the marking period average.

Assignments ARE converted into percentages = NUMBER OF POINTS DOESN'T MATTER.

ASSIGNMENTS CAN BE WEIGHTED. Assignments are multiplied by their given weight and then averaged.

Assume HW = 25% of MP grade; Quiz = 25%; and Tests = 50% for a total of 100 percentage points possible.

Teacher can assign a weight to each assignment to have it count more or less than other assignments in the category.

HW	Pts Earned	Pts Possible	Assignment grade	QUIZ	Pts Earned	Pts Possible	Assignment grade	TEST	Pts Earned	Pts Possible	Assignment grade
Wt=2	10	10	100% <b>x2</b>	Wt = 1	50	50	100% <b>x1</b>	Wt = 1	80	100	80% <b>x1</b>
Wt=1	9	10	90% <b>x1</b>	Wt = 1	42	50	84% <b>x1</b>	Wt = 2	94	100	94% <b>x2</b>
Wt=1	15	20	75% <b>x1</b>	Wt = 1	48	50	96% <b>x1</b>	Wt = 2	180	200	90% <b>x2</b>
Wt=1	4	5	80% <b>x1</b>								
<b>AVG:</b>			<b>89.00</b>	<b>AVG:</b>			<b>93.33</b>	<b>AVG:</b>			<b>89.60</b>

Category avg. is calc. by averaging the weighted assignments w/in the category ( $\frac{\text{Grade 1} \times \text{weight} + \text{Grade 2} \times \text{weight, etc.}}{\text{Number of grades (with weighting)}}$ ).

Marking period average using **weighted categories and assignments** = **90.38%** = **A-**

$$\begin{aligned}
 & (\text{HW category average} \times \text{HW category weighting}) && 89.00 \times 25\% \\
 & + (\text{Quiz category average} \times \text{Quiz category weighting}) && 93.33 \times 25\% \\
 & + (\text{Test category average} \times \text{Test category weighting}) && 89.60 \times 50\%
 \end{aligned}$$