Demystifying Bonus Items in a Weighted Grade Book

Scenario 1:

This scenario is a weighted grading system with no bonus grade items.

Weighted Grading System:

Assignment	5%
Exams*	75%
Quizzes*	20%
Total	100%

*There are two exams and two quizzes. Each are equally weighted in their respective category.

Example 1 - Final Calculated Grade without bonus:

Assume the individual grades items and **max points** are as follows:

Assignment		20
Exams:		
	Exam 1	100
	Exam 2	100
Quizzes:		
	Quiz 1	20
	Quiz 2	20

Assume one student received the following grades:

Assignment	20
Exam 1	90
Exam 2	95
Quiz 1	18
Quiz 2	20

Grade Calculations:

Assignment	20 ÷ 20 = 100% X 5% = 5%
Exams	(90 + 95) ÷ 200 = 92.5% X 75% = 69.38%
Quizzes	(18 + 20) ÷ 40 = 95% X 20% = 19%

Final Calculated Grade = 5% + 69.38% + 19% = **93.38%**

Scenario 2:

Bonus Item **not in a category**. All items, categories, and the final grade are set to "Can Exceed."
Assigning extra credit and **Bonus Items** can make the Final Grade go above 100%.

Example 2 - Final Calculated Grade with **bonus points not in a category**:

Weighted Grading System:

Assignment	5%
Exams*	75%
Quizzes*	20%
Total	100%

*There are two exams and two quizzes. Exams and Quizzes are equally weighted. The **bonus points could add an extra 1% to the overall grade**.

Assume the individual grades items and **max points** are as follows:

Assignment		20
Exams:		
	Exam 1	100
	Exam 2	100
Quizzes:		
	Quiz 1	20
	Quiz 2	20
Bonus		5

Assume one student received the following grades:

Assignment	20
Exam 1	90
Exam 2	95
Quiz 1	18
Quiz 2	20
Bonus	5

Grade Calculations:

Assignment	$20 \div 20 = 100\% \times 5\% = 5\%$
Exams	$(90 + 95) \div 200 = 92.5\% \times 75\% = 69.38\%$
Quizzes	$(18 + 20) \div 40 = 95\% \times 20\% = 19\%$
Bonus	$5 \div 5 = 100\% \times 1\% = 1\%$

Final Calculated Grade = 5% + 69.38% + 19% + 1% = **94.38%**

NOTE:
- A bonus item **not in a category** with a weight of 1% yields up to a 1% increase in the overall grade, 1% of 100%).
- If you use a "Bonus" item with no category, limit its weight to the most you wish to add to the final course percentage. For example, if you do not want to add more than 4% to any given final grade, limit the Bonus item's weight to 4%. The bonus points can be any number of points because the weight makes the difference in the overall percent.

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Scenario 3:

Bonus Item in a category with the weights distributed evenly. All items, categories, and the final grade are set to "Can Exceed." Assigning extra credit and **Bonus Items** can make the Final Grade go above 100%.

Example 3 - Final Calculated Grade with bonus points added to category:

Weighted Grading System:

Assignment   5%
Exams*   75%
Quizzes*   20%
Total   100%

*There are two exams and two quizzes. Exams are equally weighted. Quizzes are equally weighted and the **bonus points could add an extra 1% to the Quizzes category**.

Assume the individual grades items and **max points** are as follows:
    Assignment   20
    Exams:
        Exam 1   100
        Exam 2   100
    Quizzes:
        Quiz 1   20
        Quiz 2   20
        Bonus   5

Assume one student received the following grades:
    Assignment   20
    Exam 1   90
    Exam 2   95
    Quiz 1   18
    Quiz 2   20
    Bonus   5

Grade Calculations:

    Assignment $20 \div 20 = 100\% \times 5\% = 5\%$
    Exams $(90 + 95) \div 200 = 92.5\% \times 75\% = 69.38\%$
    Quizzes $(18 + 20) \div 40 = (95\% \times 20\%) + (1\% \times 20\%) = 19.2\%$

    Final Calculated Grade = 5% + 69.38% + 19.2% = **93.58%**

NOTE:
- A bonus item with a weight of 1%, within a category having a weight of 20%, yields up to a 1% increase in the category, 1% of 20%).
- Because of the complexity of ascertaining the correct weighting for the bonus grade item in order to obtain the specific effect on the category grade, including bonus grade items in categories in the "Weighted" system is not recommended.

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Scenario 4:

Bonus Item in a category with the weights distributed evenly. All items, categories, and the final grade are set to "Can Exceed." Assigning extra credit and **Bonus Items** can make the Final Grade go above 100%.

Example 4 - Final Calculated Grade with bonus points added to category:

Weighted Grading System:

Assignment	5%
Exams*	75%
Quizzes*	20%
Total	100%

*There are two exams and two quizzes. Exams are equally weighted. Quizzes are equally weighted and the **bonus points could add an extra 2% to the Quizzes category**.

Assume the individual grades items and **max points** are as follows:

Assignment	20
Exams:	
Exam 1	100
Exam 2	100
Quizzes:	
Quiz 1	20
Quiz 2	20
Bonus	5

Assume one student received the following grades:

Assignment	20
Exam 1	90
Exam 2	95
Quiz 1	18
Quiz 2	20
Bonus	5

Grade Calculations:

Assignment	20 ÷ 20 = 100% X 5% = 5%
Exams	(90 + 95) ÷ 200 = 92.5% X 75% = 69.38%
Quizzes	(18 + 20) ÷ 40 = (95% X 20%) + (2% X 20%) = 19.4%

Final Calculated Grade = 5% + 69.38% + 19.4% = **93.78%**

NOTE:
- A bonus item with a weight of 2%, within a category having a weight of 20%, yields up to a 2% increase in the category, 2% of 20%).
- Because of the complexity of ascertaining the correct weighting for the bonus grade item in order to obtain the specific effect on the category grade, including bonus grade items in categories in the "Weighted" system is not recommended.

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Scenario 5:

Bonus Item in a category with the weights distributed evenly. All items, categories, and the final grade are set to "Can Exceed." Assigning extra credit and **Bonus Items** can make the Final Grade go above 100%.

Example 5 - Final Calculated Grade with bonus points added to category:

Weighted Grading System:

Assignment   5%
Exams*   75%
Quizzes*   20%
Total   100%

*There are two exams and two quizzes. Exams are equally weighted. Quizzes are equally weighted and the **bonus points could add an extra 5% to the Quizzes category**.

Assume the individual grades items and **max points** are as follows:
   Assignment   20
   Exams:
        Exam 1   100
        Exam 2   100
   Quizzes:
        Quiz 1   20
        Quiz 2   20
        Bonus   5

Assume one student received the following grades:
   Assignment   20
   Exam 1   90
   Exam 2   95
   Quiz 1   18
   Quiz 2   20
   Bonus   5

Grade Calculations:

   Assignment   20 ÷ 20 = 100% X 5% = 5%
   Exams   (90 + 95) ÷ 200 = 92.5% X 75% = 69.38%
   Quizzes   (18 + 20) ÷ 40 = (95% X 20%) + (5% X 20%) = 20%

   Final Calculated Grade = 5% + 69.38% + 20% = **94.38%**

NOTE:
- A bonus item with a weight of 5%, within a category having a weight of 20%, yields up to a 5% increase in the category, 5% of 20%).
- Because of the complexity of ascertaining the correct weighting for the bonus grade item in order to obtain the specific effect on the category grade, including bonus grade items in categories in the "Weighted" system is not recommended.

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