



## **3Sys Release Notes 4.1.3.0 - Supplement (a)**

### **Normalised Total Calculations for Multiple Tasks**



Document Reference: 4130\_SU\_3\_a/1

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Published by WCBS October 2014.

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## Contents

<b>About this Release Note Supplement.....</b>	<b>4</b>
<b>About Contacting Us .....</b>	<b>4</b>
<b>About Creating a Markbook Normalised Total Calculation for Multiple Tasks.....</b>	<b>4</b>
About the Normalised Maximum Mark .....	5
About Task Weighting and the Normalised Weighted Total Calculation.....	6
About the Normalised Total – Option 1.....	7
About the Normalised Total – Option 2.....	8
About the Normalised Weighted Total – Option 1 .....	9
About the Normalised Weighted Total – Option 2 .....	10
<b>Creating a Markbook Normalised Total Calculation for Multiple Tasks .....</b>	<b>11</b>

## About this Release Note Supplement

This Release Note Supplement details the new Normalised Total calculations for multiple tasks functionality, available with **3Sys** version 4.1.3.0.

## About Contacting Us

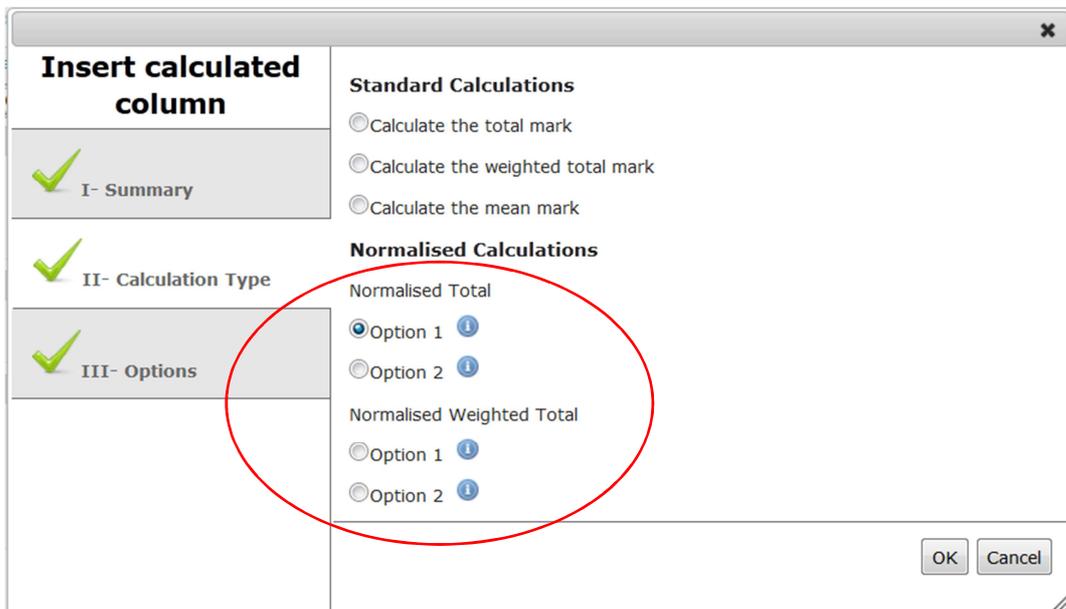
For further information on known issues, work-arounds and fixes, please visit our website Customer Centre: <http://customers.wcbs.co.uk/>

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## About Creating a Markbook Normalised Total Calculation for Multiple Tasks

For how to create a Markbook Normalised Total calculation for multiple tasks, see *Creating a Markbook Normalised Total Calculation for Multiple Tasks on p.11*.

In addition to the Standard Calculations there are now four normalised calculation options available, two of which take into account the weighting assigned to the selected tasks; these four options are available on the **Insert calculated column** screen:



**NOTE:** All four of the normalised calculation options use the mark 'out of' as entered in the **Normalised Maximum Mark** field, see *About the Normalised Maximum Mark on p.5*.

In order to calculate normalised totals, you need to:

1. Select the relevant pupils for whom you wish to perform the calculation.
2. Pick the tasks on which you want to perform the calculation.
3. Specify the type of normalised calculation you wish to perform:
  - a. Normalised Totals
  - b. Normalised Weighted Totals
4. Save the calculation.

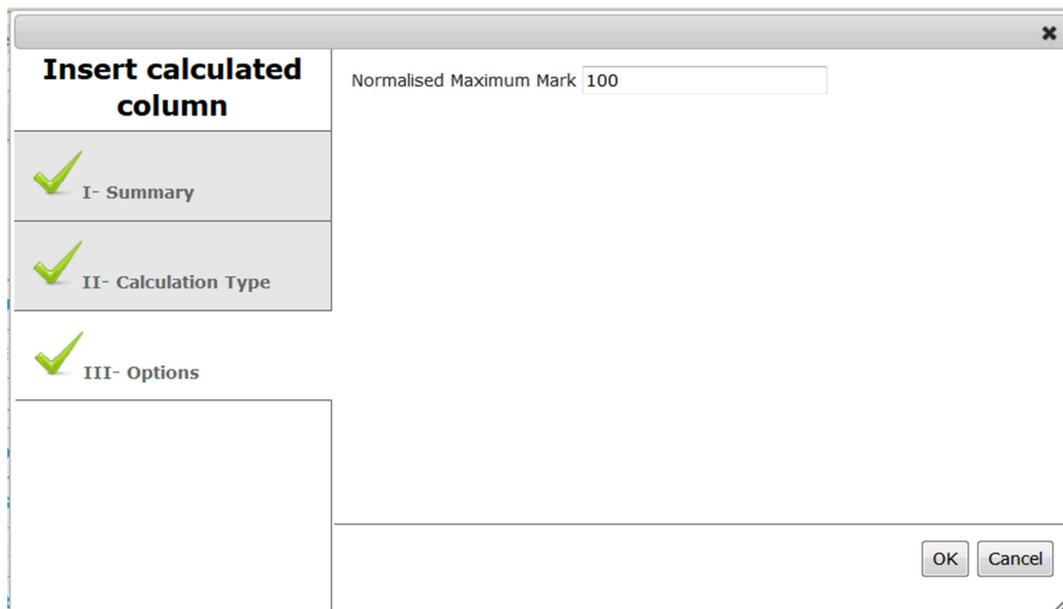
Each of the four normalised total options perform different calculations and consequently return different results for the same data. You need to ensure that you run the relevant calculation for your purposes. To help you decide which calculation you need, see:

- *About the Normalised Total – Option 1 on p. 7.*
- *About the Normalised Total – Option 2 on p.8.*
- *About the Normalised Weighted Total – Option 1 on p.9.*
- *About the Normalised Weighted Total – Option 2 on p.10.*

### About the Normalised Maximum Mark

The **Normalised Maximum Mark** field enables you to set the mark ‘out of’ on which the normalised calculations are based. By default, the **Normalised Maximum Mark** field is set to ‘100’; you can alter this value if required.

When you have selected one of the four normalised calculations on the **Calculation Type** tab of the **Insert calculated column** screen, the **Normalised Maximum Mark** field appears on the **III Options** tab. (The fields available on the **III Options** tab change dependent on the type of calculation you have chosen to perform.)



## About Task Weighting and the Normalised Weighted Total Calculation

When a task is set up, a weighting is assigned to indicate the importance of this task to the pupils' overall scores. For example, the Director of Studies may have set up a Class Essay task to have a weighting of 0.8, and the Homework task with a weighting of 0.2, as the Class Essay is deemed more important than the Homework task.

A normalised weighted total calculation proportionally calculates the importance of each task, and gives you a single score for all tasks selected. Consequently for a normalised weighted total calculation, the total weightings do not have to equal 1, as it is only the relative size of the weightings that matter. For example, the weightings between two tasks could be '0.8' and '0.2', but weightings '8' and '2' would also be valid, as would '0.8' and '0.3'.

**NOTE:** The examples used in this Supplement use just two tasks on which to perform the calculations; however, you can perform calculations on more than two tasks.

**NOTE:** If you need to check the weighting of a task before performing a calculation, on the **Mark Inquiry** screen hover over the **Information** button  and click **Edit**, the **Edit Task** screen appears displaying the **Weighting** field on the right-hand side.

## About the Normalised Total – Option 1

The **Normalised Total – Option 1** calculates a pupil’s overall score across the tasks by combining the value of the task marks and then calculating the normalised total to give the overall score. You can set the value for the normalised total within the **Normalised Maximum Mark** field (for details, see *About the Normalised Maximum Mark on p.5*).

The calculation is on a ‘per pupil’ basis.

**NOTE:** This calculation assigns equal importance to each task.

### How is the Normalised Total – Option 1 calculated?

**NOTE:** By default, the **Normalised Maximum Mark** field is set to 100; it is set to 100 for this example.

For example, Harry Cheung scored 90/100 for his Homework task and 5/20 for his Class Essay task. The **Normalised Total - Option 1** combines these marks and then calculates the normalised total. Using the **Normalised Total - Option 1**, Harry’s overall score for these two tasks was 79 out of 100.

	<b>Homework</b> ✕ 4/9 04/09/2014 ⓘ English Max:100	<b>Class Essay</b> ✕ 5/9 05/09/2014 ⓘ English Max:20	<b>Norm Total</b> ✕ <b>Opt 1</b> ⓘ 15/09/2014 ⓘ English Max:100
<b>CHEUNG, Fung L (Harry)</b> 👤	90	5	79

For a breakdown of each step of the **Normalised Total – Option 1** calculation, see below:

Task	mark	out of	normalised	normalisation level (100 equivalent to percent)
1	5	20	25	100
2	90	100	90	
<b>Normalised Total Calculation</b>				
	<b>mark</b>	<b>out of</b>	<b>%</b>	
	79.166667	100	79.1666667	
<b>Normalised Total Calculations</b>				
			<b>Result</b>	
<b>Step 1</b>	Total all marks/2 - ((90+5)/2)		47.5	
<b>Step 2</b>	Total all 'out of' scores/2 - ((20+100)/2)		60	
<b>Step 3</b>	Result Step 1/Result Step 2 * Normalisation level ((47.5/60)*100)		79.1666667	
	<b>Normalised Total (Option 1)</b>		<b>79.1666667</b>	

## About the Normalised Total – Option 2

The **Normalised Total – Option 2** calculates a pupil’s overall score across the tasks by creating a normalised total for each task mark and then combining these values to give the overall score. You can set the value for the normalised total within the **Normalised Maximum Mark** field (for details, see *About the Normalised Maximum Mark on p.5*).

The calculation is on a ‘per pupil’ basis.

**NOTE:** This calculation assigns equal importance to each task.

### How is the Normalised Total – Option 2 calculated?

**NOTE:** By default, the **Normalised Maximum Mark** field is set to 100; it is set to 100 for this example.

For example, Harry Cheung scored 90/100 for his Homework task and 5/20 for his Class Essay task. The **Normalised Total - Option 2** converts each task mark into a normalised total and then combines these values to derive the overall score. Using the **Normalised Total - Option 2**, Harry’s overall score for these two tasks was 58 out of 100.

	<b>Homework</b> ✕ 4/9 04/09/2014 ⓘ English Max:100	<b>Class Essay</b> ✕ 5/9 05/09/2014 ⓘ English Max:20	<b>Norm Total Opt 2</b> ✕ 15/09/2014 ⓘ English Max:100 ⓘ
<b>CHEUNG, Fung L (Harry)</b> 🟢	90	5	58

For a breakdown of each step of the **Normalised Total – Option 2** calculation, see below:

Task	mark	out of	normalised	normalisation level (100 equivalent to percent)
1	5	20	25	100
2	90	100	90	
<b>Normalised Total (Mean) Calculation</b>				
	<i>mark</i>	<i>out of</i>	<i>%</i>	
	57.5	100	57.5	
<b>Normalised Total (Mean) Calculations</b>				
			<i>Result</i>	
<b>Step 1</b>	Task 1 = Pupil Mark/Max Test Mark * normalisation level - ((5/20)*100)		25	
<b>Step 2</b>	Task 2 = Pupil Mark/Max Test Mark * normalisation level - ((90/100)*100)		90	
<b>Step 3</b>	Step 1 + Step 2/2 - ((25+90)/2)		57.5	
<b>Step 4</b>	Step 3/Normalisation level * 100 ((57.5/100)*100)		57.5	
	<b>Normalised Total (Mean)</b>		57.50%	

## About the Normalised Weighted Total – Option 1

The **Normalised Weighted Total – Option 1** calculates a pupil’s overall score across the tasks by taking into the account the weighting value assigned to each task, combining these values and then applying the normalised total to give the overall score. You can set the value for the normalised total within the **Normalised Maximum Mark** field (for details, see *About the Normalised Maximum Mark on p.5*).

The calculation is on a ‘per pupil’ basis.

**NOTE:** If you are unsure about task weighting, see *About Task Weighting and the Normalised Weighted Total Calculation on p.6*.

### How is the Normalised Weighted Total – Option 1 calculated?

**NOTE:** By default, the **Normalised Maximum Mark** field is set to 100; it is set to 100 for this example.

For example, Harry Cheung scored 5/20 for his Class Essay task and 90/100 for his Homework task. The **Normalised Weighted Total - Option 1** takes into account the weighting value each task is assigned, and then combines these values and applies the normalised total to give the overall score. Using the **Normalised Weighted Total - Option 1**, Harry’s overall score for these two tasks was 61 out of 100.

	Class Essay 5/9 05/09/2014 English Max:20	Homework 9/9 08/09/2014 English Max:100	Norm Wt Tot - Opt 1 15/09/2014 English Max:100
CHEUNG, Fung L (Harry)	5	90	61

For a breakdown of each step of the **Normalised Weighted Total – Option 1** calculation, see below:

<i>normalisation level (100 equivalent to percent)</i>
100

Task	mark	out of	normalised	Weighting
1	5	20	25	0.8
2	90	100	90	0.2

Normalised Weighted Total Calculation		
mark	out of	%
61.11111111	100	61.11111111

Normalised Weighted Total Calculations		
		Result
Step 1	Task 1 = Mark * Weighting - (5*0.8)	4
Step 2	Task 2 = Mark * Weighting - (90*0.2)	18
Step 3	Result Step 1 + Result Step 2/2 - ((4+18)/2)	11
Step 4	Task 1 = 'out of' * Weighting - (20*0.8)	16
Step 5	Task 2 = 'out of' * Weighting - (100*0.2)	20
Step 6	Result Step 4 + Result Step 5/2 - ((16+20)/2)	18
Step 7	Result Step 3/Result Step 6 - (11/18)	0.61111111
Step 8	Result Step 7 * Normalisation Level - (0.61111111*100)	61.11111111
<b>Normalised Weighted Total (Option 1)</b>		<b>61.11111111</b>

## About the Normalised Weighted Total – Option 2

The **Normalised Weighted Total – Option 2** calculates a pupil’s overall score across the tasks by normalising the value of each task, taking into account the weighting of each task, then combining these values to give the overall score. You can set the value for the normalised total within the **Normalised Maximum Mark** field (for details, see *About the Normalised Maximum Mark on p.5*).

The calculation is on a ‘per pupil’ basis.

**NOTE:** If you are unsure about task weighting, see *About Task Weighting and the Normalised Weighted Total Calculation on p.6*.

### How is the Normalised Weighted Total – Option 2 calculated?

**NOTE:** By default, the **Normalised Maximum Mark** field is set to 100; it is set to 100 for this example.

For example, Harry Cheung scored 5/20 for his Class Essay task and 90/100 for his Homework task. The **Normalised Weighted Total - Option 2** undertakes the normalisation for each score, takes into account the weighting value each task is assigned, then combines these values to give the overall score. Using the **Normalised Weighted Total - Option 2**, Harry’s overall score for these two tasks was 38 out of 100.

	Class Essay 5/9 05/09/2014 English Max:20	Homework 9/9 08/09/2014 English Max:100	Norm Wt Tot - Opt 2 15/09/2014 English Max:100
CHEUNG, Fung L (Harry)	5	90	38

For a breakdown of each step of the **Normalised Weighted Total – Option 2** calculation, see below:

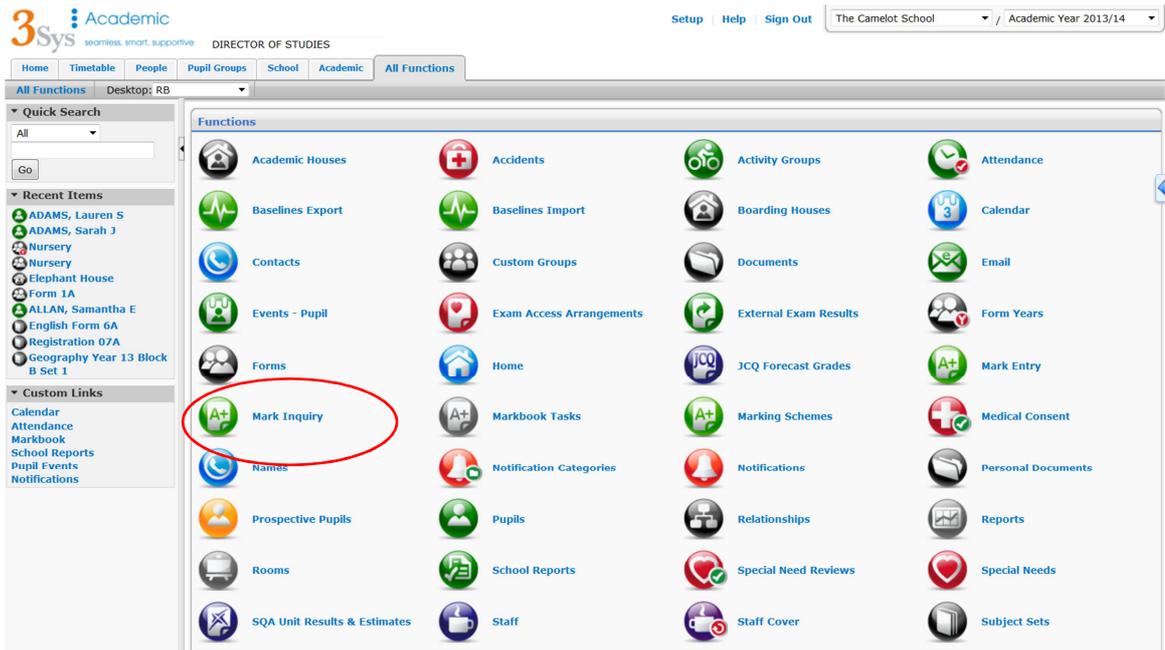
Task	mark	out of	normalised	Weighting	normalisation level (100 equivalent to percent)
1	5	20	25	0.8	100
2	90	100	90	0.2	
<b>Normalised Weighted Total (Mean) Calculation</b>					
	mark	out of		%	
	38		100	38	
<b>Normalised Weighted Total (Mean) Calculation</b>					
				Result	
Step 1	Task 1 = Pupil Mark/Max Test Mark *normalisation level - (5/20*100)			25	
Step 2	Task 2 = Pupil Mark/Max Test Mark* normalisation level - ((90/100)*100)			90	
Step 3	(Step 1*Weighting + Step 2*Weighting)/Total Weighting - ((25*0.8)+(90*0.2))/(0.8+0.2)			38	
Step 4	Normalisation Level			100	
Step 5	Result Step 3/Result Step 4 - ((38/100)*100)			38.00%	
	<b>Normalised Weighted Total (Mean)</b>			<b>38.00%</b>	

## Creating a Markbook Normalised Total Calculation for Multiple Tasks

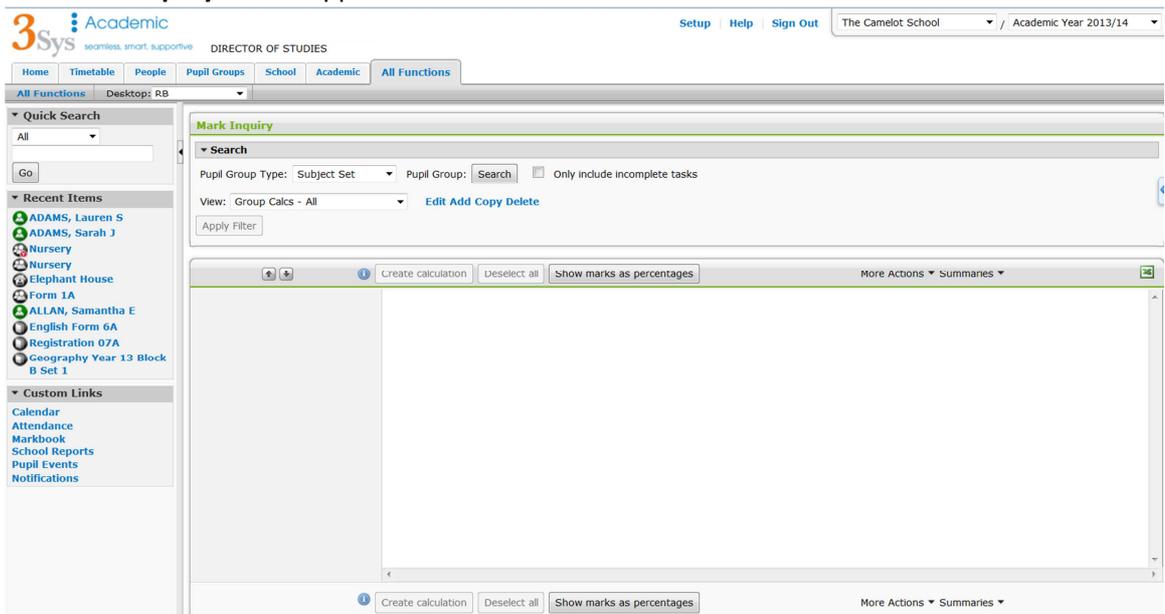
For an explanation of how 3Sys calculates the markbook normalised totals, see *About Creating a Markbook Normalised Total Calculation for Multiple Tasks* on p.4.

How to create a Markbook Normalised Total for multiple tasks:

1. Open 3Sys.
2. On the 3Sys Home page click on the **All Functions** tab.



3. Click **Mark Inquiry**.  
The **Mark Inquiry** screen appears.



4. Use the **Search** panel to display the relevant pupils' data:
  - a. Select the relevant **Pupil Group Type** from the droplist and click the **Pupil Group: Search** button.

The **Search** screen appears.



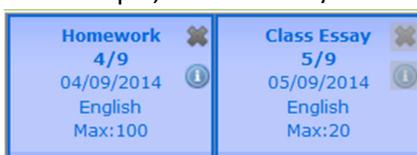
- b. Select and enter search terms, and click the **Search** button. The Search list is populated.
  - c. Select the appropriate item. You are returned to the **Mark Inquiry** screen populated with relevant markbook data.

Calculated columns have headings with a light blue background and a calculator icon.

English Form 6A	Homework 4/9 04/09/2014 English Max:100	Class Essay 5/9 05/09/2014 English Max:20	Class Essay 9/9 08/09/2014 English Max:100	Homework 8/9 08/09/2014 English Max:20	Norm Total Option 1 08/09/2014 English Max:100	Norm Total Option 2 08/09/2014 English Max:100	Norm Wt Total opt 1 08/09/2014 English Max:100	Norm Wt Total opt 2 08/09/2014 English Max:100
CHEUNG, Fung L (Harry)	90	5	90	5	79	58	61	
COLES, Mark	71	13	83	16	73	76	75	
FRY, Jordan	80	8	81	9	74	63	63	
HENDERSON, Mary	43	6	58	4	39	32	46	
HURST, Alexander	71	7	68	8	66	56	53	
JONES, Emily Ann	68	14	81	12	67	64	76	
PARRY, James A	84	13	70	13	81	75	68	

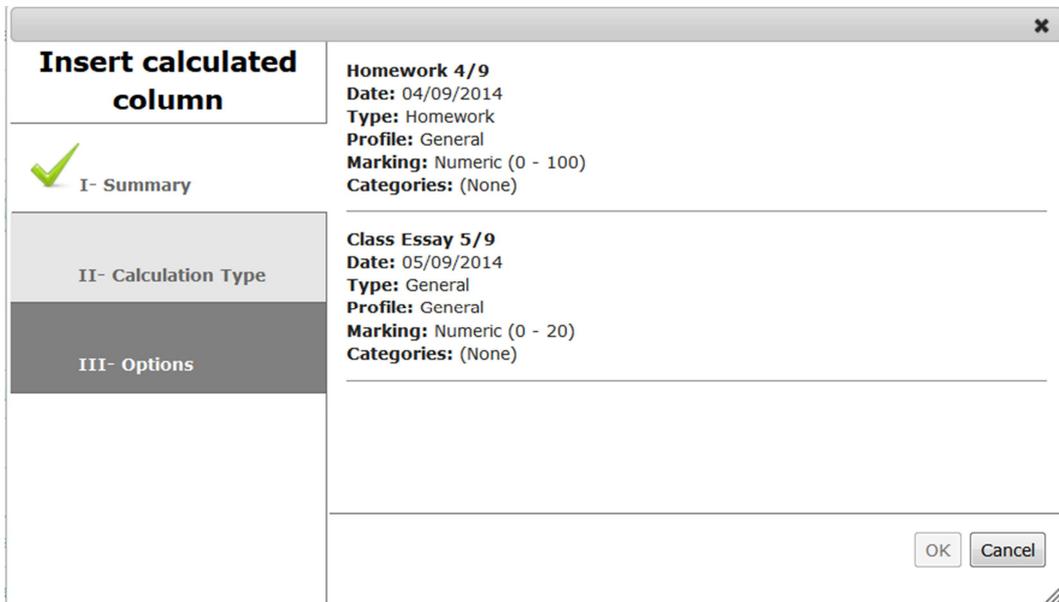
**NOTE:** If necessary you can restrict the list of pupils further, by selecting the appropriate **View** from the droplist and clicking **Apply Filter**.

5. Select the relevant column headings. For example, Homework 4/9 and Class Essay 5/9.



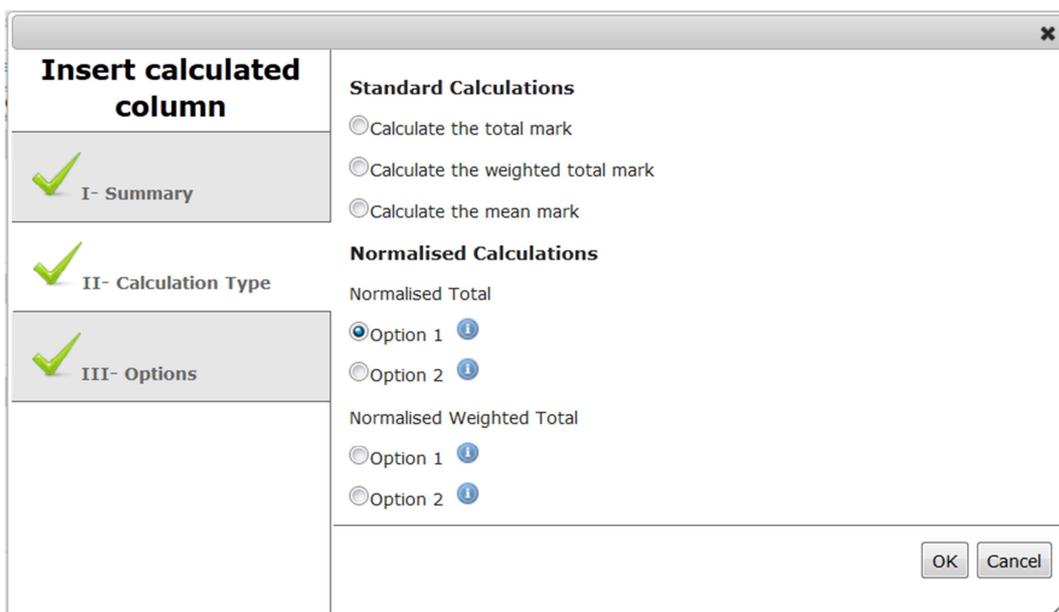
6. Click **Create Calculation**.

The **I- Summary** tab on the **Insert calculated column** screen appears, displaying details about the chosen tasks on which to perform the calculation.



7. Click the **II- Calculation Type** tab.

A list of the different types of available calculations appears.



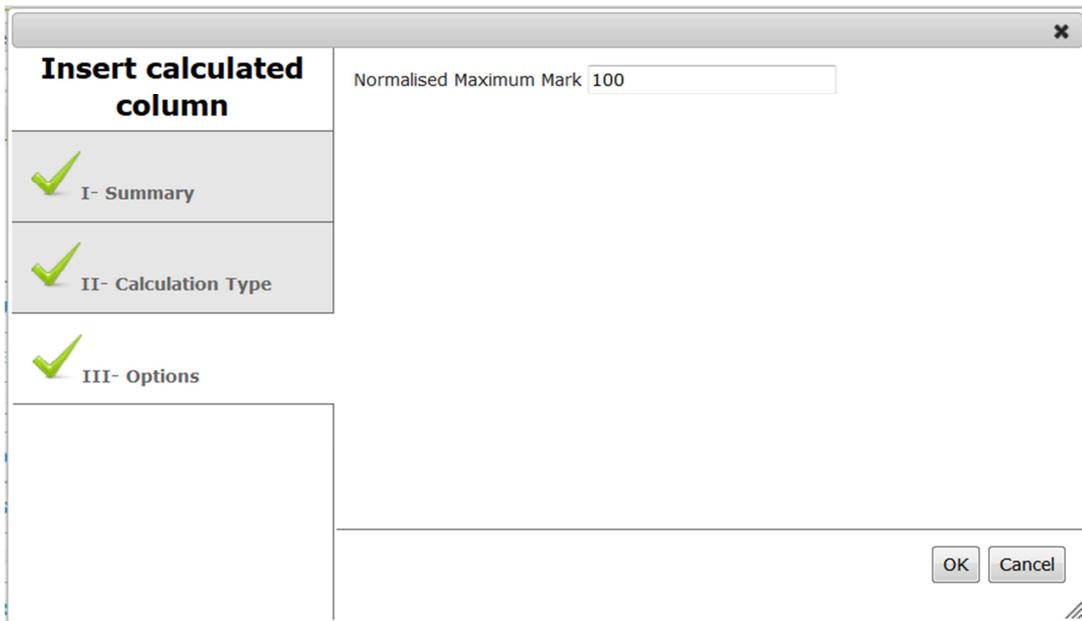
**NOTE:** Hover over each **Information** button to view details about the normalised total calculations available.

8. Select the relevant calculation option and click **OK**.

For example, **Normalised Total Option 1**.

9. Click the **III- Options** tab.

By default, the **Normalised Maximum Mark** field is set to 100. You can alter this value if required.



10. Click **OK**.

You are returned to the **Mark Inquiry** screen, displaying a new calculation column (indicated by the light blue column heading and a calculator icon).

English Form 6A	Homework 4/9 04/09/2014 English Max:100	Class Essay 5/9 05/09/2014 English Max:20	New Calc Column 10/09/2014 Max:100
CHEUNG, Fung L (Harry)	90	5	79.167
COLES, Mark	71	13	70.000
FRY, Jordan	80	8	73.333
HENDERSON, Mary	43	6	40.833
HURST, Alexander	71	7	65.000
JONES, Emily Ann	68	14	68.333
PARRY, James A	84	13	80.833

11. Click on the **Save** button  within the new column's heading. The **Save Calculated Task** screen appears.

**▼ Main Details**

Task:  Assessment Period:

Task Date: 10/09/2014

Task Type:

Categories:

Subject: English

Description: Normalised Total Mark

**▼ Calculation**

Calculation Type: Normalised Total

Minimum Mark: 0

Maximum Mark: 100

Number Of Decimal Places: 0

Weighting: 1

**▼ Permission**

Visibility: Global

Owner: BRYANT, Melanie

12. Complete the relevant fields, including:
  - a. **Task:** Enter the name for the task.
  - b. **Task Type:** Select the appropriate Task Type.
  - c. **Number Of Decimal Places:** Select the required number of decimal places.
  - d. **Weighting:** By default this is set to 1. If required you can amend this value, if the normalised total calculation is itself to form part of another calculated task.
13. Click **Save**.

You are returned to the **Mark Inquiry** screen, with the newly named column displayed. For example:

	Homework 4/9 04/09/2014 English Max:100	Class Essay 5/9 05/09/2014 English Max:20	Norm Total Opt 1 15/09/2014 English Max:100
CHEUNG, Fung L (Harry)	90	5	79
COLES, Mark	71	13	70
FRY, Jordan	80	8	73
HENDERSON, Mary	43	6	41
HURST, Alexander	71	7	65
JONES, Emily Ann	68	14	68
PARRY, James A	84	13	81

**NOTE:** Once you have created a calculation, you are unable to change it. However, you can use the same tasks to create another calculated column.

**NOTE:** You can view the tasks on which a calculation is based, by hovering over the relevant information button  and clicking **Edit**. The task column headings on which the calculation was performed are highlighted with a dark blue border.