A Calculated Formula question contains a formula, the variables of which can be set to change for each user. The variable range is created by specifying a minimum value and a maximum value for each variable. Answer sets are randomly generated. The correct answer can be a specific value or a range of values.

Adding a calculated question is a three step process:

• Create the question and formula.
• Define the values for the variables.
• Confirm the variables and answers.

Example of Calculated Formula Question:

Note: This tutorial assumes the test has already been created within Blackboard. Refer to the Adding a Test to Tests/Survey/Pool area for further information about this step.

1. From the Test Canvas screen, choose Calculated Formula from the Create Question menu.

2. Enter the question text, surrounding each variable within square brackets [   ].

Note: Variables should only consist of letters (a-z), digits (0-9), periods(.), underscores(_), and/or hyphens (-). All other occurrences of the opening rectangular brace ("[") character should be preceded by the back-slash ("\") character. Variable names must be unique and cannot be reused.
3. In the Answer Formula area, enter the formula used to derive the answer by entering the variables and the mathematical operators from the toolbar. When complete, click the Checkmark button.

4. Add the Point value for the question and indicate if the question is for Extra Credit only.

5. Under the Options section, enter 0 in the Answer Range area if the correct answer must be exact or enter the allowable answer range, plus or minus a numeric or percentage variation. Indicate if Partial Credit is allowed and if units are a required part of the answer, select the units required checkbox.

6. Click the Next button to continue building the question.

7. In the Define Variables area, indicate the minimum and maximum values for the variables to be used.
8. In the **Answer Set Option** area, select how many decimal places the answer should contain and how many answer sets. Answer sets are randomly generated, and the default number of sets is 10.

9. Click the **Calculate** button to continue.

10. On the final screen, the provided answer sets can be modified and/or removed if desired. If any numbers are changed, be sure to press the **Calculate** button to update the answers.

11. Add feedback for correct/incorrect answers as desired.

12. Finally, click **Submit** to save the completed question.