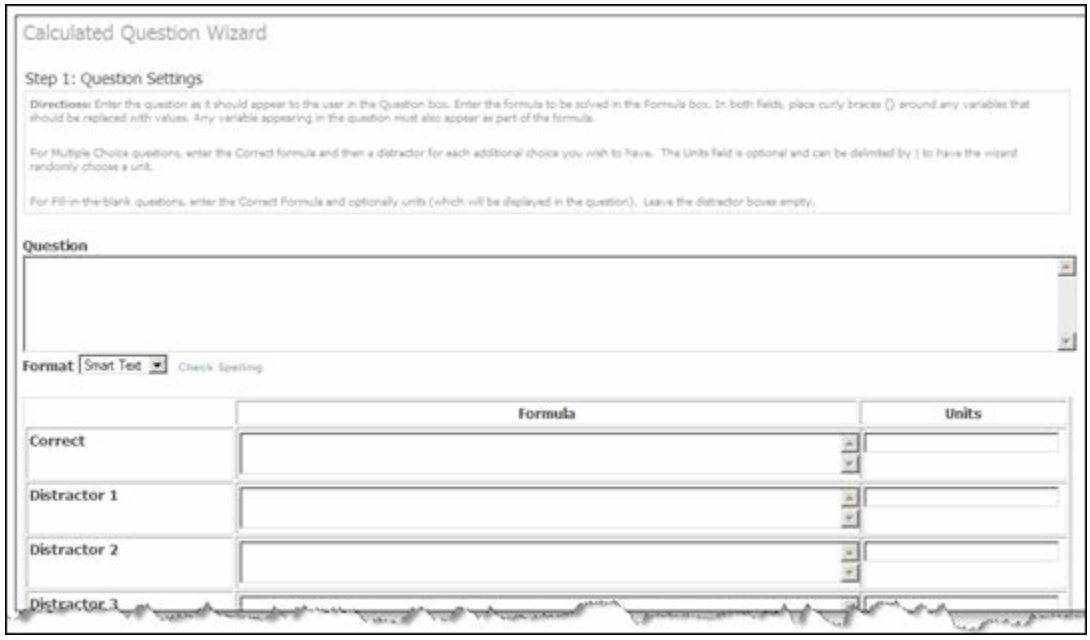
Calculated Questions Wizard

The Calculated Questions Wizard allows a group of questions to be created on the basis of a formula and variables input by the author. Instructors can also choose how many of the questions are asked on a given test allowing students to receive different versions of the same question at random.

To create a series of formula based questions using the Calculated Question Wizard:

1. Click the **Add Question** hyperlink (located on the quiz toolbar).
2. Click the **Calculated Questions** hyperlink or icon ( ).



3. Type a question in the **Question** field, but use variable letters within curly braces in place of any numeric values that are being used within the question.

   For example, type the following:

   {X} meters divided by {Y} millimeters multiplied by {Z} centimeters equals ____.

4. Type the formula to be solved in the **Correct Formula** field using supported characters to build the mathematical equation. Use variable letters within curly braces in place of any numeric values that are being used with the formula. Any variable appearing in the question must also appear as part of the formula.

   Following the example above, type the following in the **Correct Formula** field:

   {X} / ({Y} * 1000) * ({Z} * 100)

Supported mathematical symbols include:

Symbol	Mathematical Meaning
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Percentage
.	Decimal
^	Raise to a power
\	Integer Division
MOD	Modulus
2E10	(E) Scientific Notation
SQRT	Square Root
SIN	Sine
COS	Cosine
TAN	Tangent

5. If applicable, type the correct label in the **Correct Units** field.

   Following our example, type meters in the **Correct Units** field.

6. Use of the **Distracter Formula** field determines whether the Calculated Questions Wizard creates the questions as a multiple choice or as fill-in-the-blank. To create multiple choice questions, you must enter a distracter for each additional choice you wish to have. To create fill-in-the-blank questions, you must leave the distracter boxes empty.

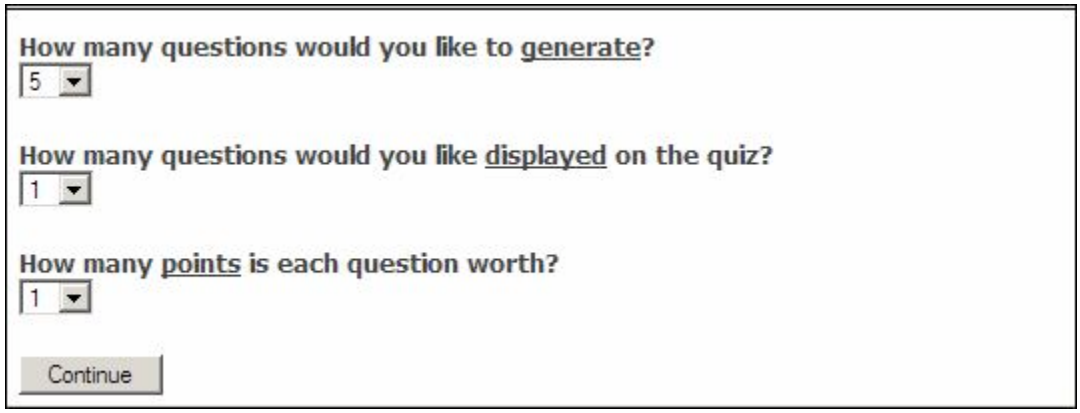
   Following our example, create multiple choice questions by typing the following formulas in the first three **Distracter Formula** fields:

   Distracter 1: **{X} / ({Y} * 100) + ({Z} * 10)**
   Distracter 2: **{X} / ({Y} * 1000) * ({Z} * 10)**
   Distracter 3: **{X} / ({Y} * 1000) * {Z}**

7. If applicable, type distracter labels in the appropriate **Distracter Units** fields.

 The units field is optional and can be delimited by the pipe symbol (|) to have the wizard randomly choose one of several units.

Following our example, type meters in the first distracter units field, type meters|centimeters|millimeters in the second distracter units field and type centimeters in the third distracter units field. Upon completion of the questions, the Calculated Question Wizard randomly selects one of the three unit labels for each version of the distracter two choice. Choice orders are automatically randomized upon question creation.



8. Select the number of questions you want to generate from the **How many questions would you like to generate?** drop-down list.
9. Select the number of questions you would like displayed from the **How many questions would you like displayed on the quiz?** drop-down list.
10. Select how many points each question is worth from the **How many points is each question worth?** drop-down list.
11. Click the **Continue** button.

12. Type the minimum allowed value in the **Min** field and the maximum allowed value in the **Max** field for each variable specified.
13. Select the number of decimal places to allow for each variable from the **Dec** drop-down list.
14. Click the **Continue** button.

15. Review the provided variable values and change, if desired.
16. Select the number of decimal places the answers should be rounded to from the **How many decimal places should answers be rounded to?** drop-down list.
17. Click the **Continue** button.

18. Review the provided correct and incorrect Answer Values for each of the questions.
19. For fill-in-the-blank questions only, select the **require exact match for correct answer** checkbox if you want to require responses to exactly match what is shown on the screen. When left unselected, a response that is more accurate than the rounded answer displayed is also counted as correct.
20. Click the **Finish** button.