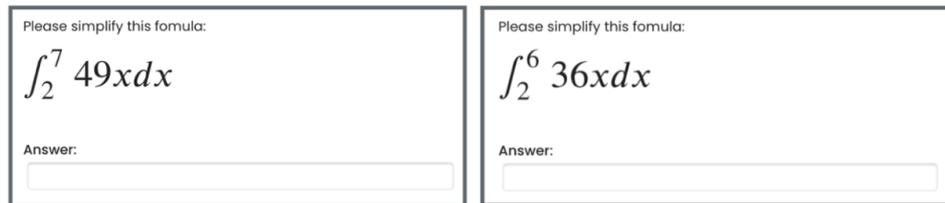


# Variable Numeric Set with Units question type

180 Yezi Yang Tue, Nov 21, 2023 STEM

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An example of Variable Numeric Set with Units question type

## Overview:

This guide will show you how to create a Variable Numeric Set with Units question type.

## What to know:

The features of Variable Numeric Set with Units question type are listed below.

1. It supports random variables in the questions. ( As can be seen from the example above, one student sees the question as shown in the first picture, while another student sees the question as shown in the second picture. It is because this question uses random variables.)
2. It supports variables defined by other expressions.
3. It supports variables with multiple pre-defined values.
4. It supports answer tolerance and the use of units.

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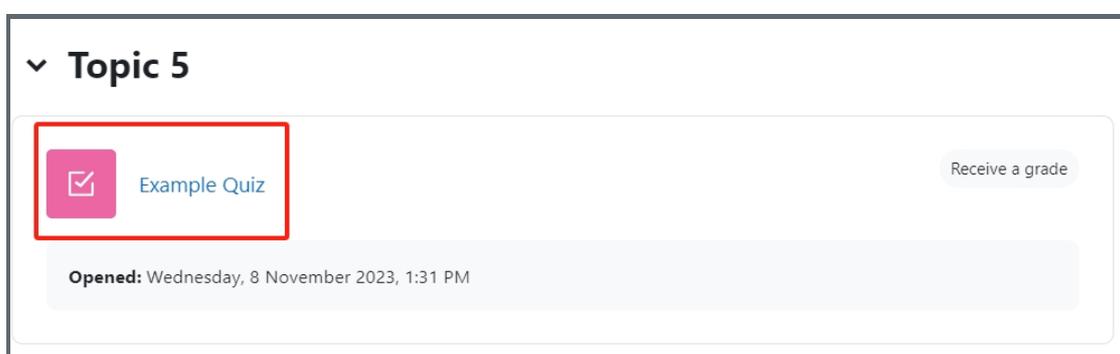
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### Step 1: Access the Quiz activity where you want to create the question

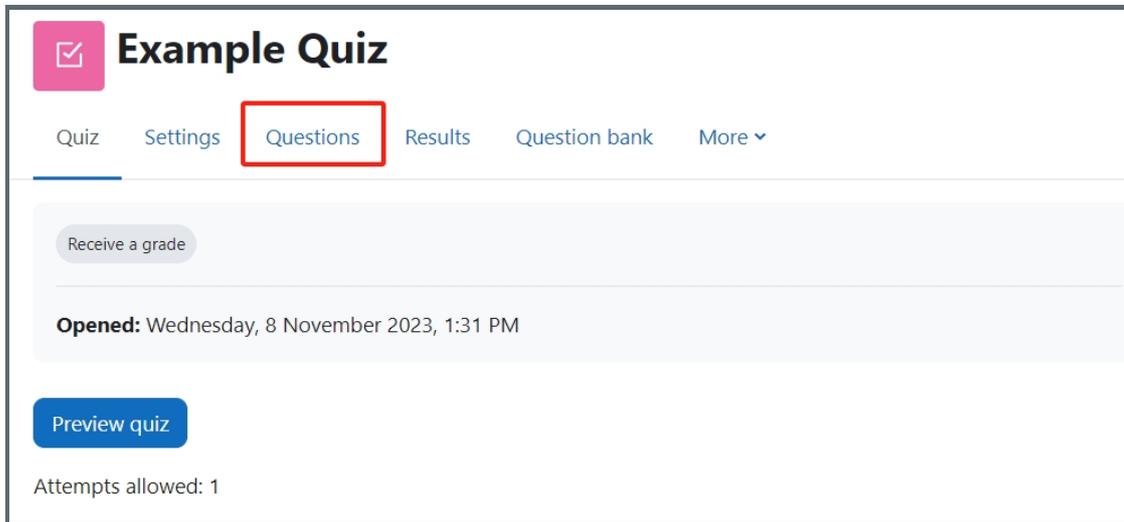
In your module area/course, click the link of the Quiz activity where you want to create a question.



Note: If an appropriate Quiz activity doesn't exist in your module area/course, please see [Add a quiz](#) for details of how to create one.

## Step 2: Open the 'Questions' tab

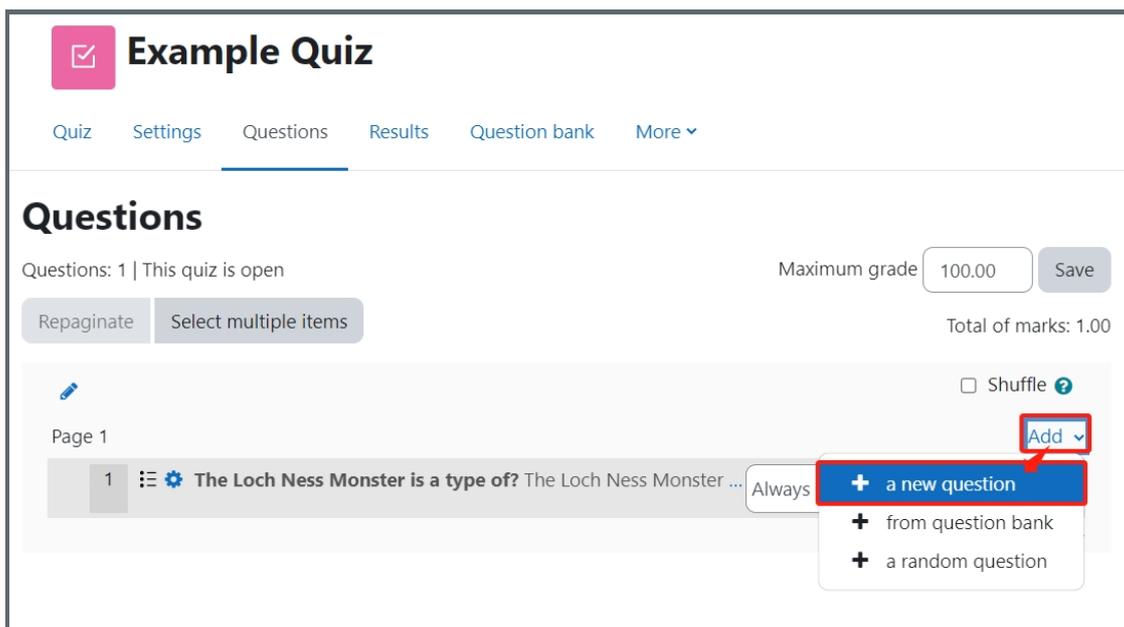
1. Open the 'Questions' tab



The screenshot shows the 'Example Quiz' interface. At the top, there is a navigation bar with tabs: 'Quiz', 'Settings', 'Questions', 'Results', 'Question bank', and 'More'. The 'Questions' tab is highlighted with a red box. Below the navigation bar, there is a 'Receive a grade' button. The main content area shows 'Opened: Wednesday, 8 November 2023, 1:31 PM' and a 'Preview quiz' button. At the bottom, it says 'Attempts allowed: 1'.

## Step 3: Add a new question

1. On the following page, click the 'Add' link.
2. Click the 'a new question' link in the dropdown menu.



The screenshot shows the 'Example Quiz' interface with the 'Questions' tab selected. The main content area is titled 'Questions' and shows 'Questions: 1 | This quiz is open'. There are buttons for 'Repaginate' and 'Select multiple items'. The 'Maximum grade' is set to '100.00' and there is a 'Save' button. The 'Total of marks' is '1.00'. There is a 'Shuffle' checkbox. The 'Add' dropdown menu is open, showing options: '+ a new question', '+ from question bank', and '+ a random question'. The '+ a new question' option is highlighted with a red box.

## Step 4: Choose a question type

1. Locate and select the Variable Numeric Set with Units question type from the pop-up window.
2. Click the 'Add' button.

Choose a question type to add ✕

$2+2=?$  Calculated

$2+2=?$  Calculated simple

$2+2=?$  Calculated multichoice

$x^2$  Variable numeric

$\{1,2\}$  Variable numeric set

$\{1\}m$  Variable numeric set with units

STACK

VPL Question

CodeRunner

OTHER

Description

Allows a numeric response with units, question can have several 'variants', expressions are pre evaluated for each question variant

## Step 5: Settings

The settings of Variable Numeric Set with Units question type is very similar to the 'Variable Numeric Set' question type. The only difference is the ability to add units. Please refer to the guide for general settings: [Variable Numeric Set question type](#).

## Step 6: Set up units

In Unit section, please set up the unit and the grade of the unit.

You can set multiple units to be the correct units.

Units ▲

Unit 1 ? kg

Spaces in units Remove all spaces before grading ▾

Spacing feedback ? You are required to put a space between the number and the unit.

Replace dashes No ▾

Grade 100% ▾

Feedback

### Tips:

The random variables, such as variable a and b, need to be covered with '[[ ]]', the whole formula needs to be covered with '\$\$' before and after so that the system knows it is a random variable.

### Note:

For more information about Variable Numeric question type, please access the official documentation:

<https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=52747&section=2.1.2>

Online URL: <https://knowledgebase.xjtlu.edu.cn/article/variable-numeric-set-with-units-question-type-180.html>