1
00:00:00,330 --> 00:00:03,031
Hello, and welcome to the video about using MathJax.

2
00:00:03,960 --> 00:00:07,920
This is how you insert mathematical equations and formulas in correct notation into

3
00:00:07,950 --> 00:00:12,871
an activity. If you are unfamiliar, MathJax is a JavaScript display library that

4
00:00:12,900 --> 00:00:16,800
renders math notation in Smart Chat and makes these formulas accessible to screen

5
00:00:16,860 --> 00:00:20,970
readers. Within MathJax, we use the LaTeX markup language.

6
00:00:21,600 --> 00:00:25,500
There are many resources available on the internet to learn LaTeX, but we recommend

7
00:00:25,590 --> 00:00:27,600
starting with the links in the description of this video.

8
00:00:28,920 --> 00:00:33,600
There are three different areas where this applies: in text, in rich text, and

9
00:00:33,661 --> 00:00:37,320
using variables within a MathJax equation, but not in a table cell.

10
00:00:38,401 --> 00:00:42,780
We will start with text. MathJax can be used in text nodes and question nodes.

11
00:00:43,680 --> 00:00:47,820
To do this, open a node where you want to place the equation and type your equation

12
00:00:47,850 --> 00:00:49,890
in LaTeX format between curly brackets.

13
00:00:50,761 --> 00:00:54,690
Here is an example of using MathJax in the possible responses of a multiple-choice

14
00:00:54,750 --> 00:00:59,401
question. Another place you can use MathJax is in the rich text editor, found in

15
00:00:59,401 --> 00:01:02,940
the materials, the end-of-activity feedback, and the intro.

16
00:01:03,901 --> 00:01:08,310
In the rich text editor, shown in the materials for this example, click on this Add

17
00:01:08,370 --> 00:01:11,280
Formula button in the top right corner of the editor toolbar.

18
00:01:12,030 --> 00:01:15,630
Type your content in LaTeX format in the text box to the right of Formula.

19
00:01:16,590 --> 00:01:19,711
Note, enclosing your content in curly brackets is not needed here.

20
00:01:20,580 --> 00:01:24,660
Here, you can adjust the margins and the alignment of your formula to change how it

21
00:01:24,690 --> 00:01:29,910
appears within the material. You can also add a very general formula description or

22
00:01:29,940 --> 00:01:33,990
the purpose of the formula, but not details, to the alt text description.

23
00:01:34,560 --> 00:01:38,970
Remember, the formula itself can be seen by the screen reader and interpreted in

24
00:01:39,000 --> 00:01:44,070
detail. One important thing to note is that you can use MathJax in any section of a

25
00:01:44,101 --> 00:01:49,620
material except for tables. Not all features are supported by every tool, and some

26
00:01:49,680 --> 00:01:52,470
features, such as matrices, are not supported.

27
00:01:52,711 --> 00:01:56,641
Now, we will go over how to insert a variable into a MathJax formula.

28
00:01:57,540 --> 00:02:02,190
To insert a variable into text, we enclose it in curly brackets, but we do the same

29
00:02:02,220 --> 00:02:07,410
to insert MathJax into text. So each variable must be enclosed in two sets of curly

30
00:02:07,440 --> 00:02:09,570
brackets when placed inside a MathJax formula.

31
00:02:09,961 --> 00:02:13,891
This tells our system to fetch the variable value, not just display the name of the

32
00:02:13,921 --> 00:02:18,570
variable in text. So suppose you have a variable tracking an X value.

33
00:02:19,200 --> 00:02:22,830
That variable is a unit variable called X value, as shown here.

34
00:02:24,330 --> 00:02:28,200
Suppose that throughout the activity, the learner is selecting different X values

35
00:02:28,290 --> 00:02:33,000
and is asked to calculate the Y value based on the equation Y equals X squared.

36
00:02:34,020 --> 00:02:38,430
So if the formula was inserted into a text node, it would be written like this.

37
00:02:39,900 --> 00:02:43,380
This equation will display whatever the X value variable is set to.

38
00:02:44,610 --> 00:02:49,320
So I set up a question asking the learner to choose an X value and set the

39
00:02:49,351 --> 00:02:53,040
responses to update the X value variable based on what the learner chose.

40
00:02:53,550 --> 00:02:57,360
Details about updating a variable through a question are covered in the variables

41
00:02:57,421 --> 00:02:57,750
video.

42
00:03:00,120 --> 00:03:02,730
This is what this question looks like from a learner's perspective.

43
00:03:03,330 --> 00:03:08,730
Notice how when I click four, the X value updates to four, and the equation shows Y

44
00:03:08,790 --> 00:03:09,900
equals four squared.

45
00:03:11,280 --> 00:03:14,309
That concludes our video about MathJax. Thanks for watching.