

## INPUT BOXES

Input boxes enable the entry of text, numbers, or Booleans on a page without the use of any tools.

In this example (see Cabri Author file *inputboxes* page 1), there are three input boxes.

The first two are asking the student for numbers.

The third one is asking the student for text.

Fill in the missing numbers in this sequence of square numbers:

1, 4, 9, 16, ,

How did you work these out?

The numbers the student enters may be checked against the expected answers and the student can be given feedback.

Fill in the missing numbers in this sequence of square numbers:

1, 4, 9, 16, ,



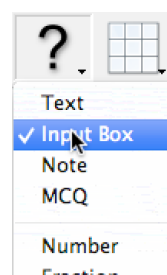
How did you work these out?

added 9 then added 11

The text the student has entered tells the teacher that the student knows a way of generating this sequence, but has made an arithmetic mistake.

### 1. CREATING AN INPUT BOX

Select the **Input Box** tool.



Click on the page to position the top left corner of the box.



Click again to position the bottom right corner of the box.



You may later change the size of an input box by dragging its bottom right corner.

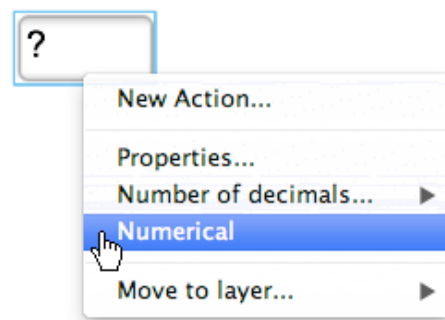


The location of an input box may be changed by dragging anywhere else on the box or its border.



Note that input boxes are movement locked by default: the student will not be able to change the size or location of the box in Student mode unless you specifically unlock it.

It is possible to set an input box to take only numerical input: right-click on the box and choose **Numerical** from the menu that appears.



The box will then be displayed as shown:



You may also change the number of decimal places accepted by the box using the right-click contextual menu.

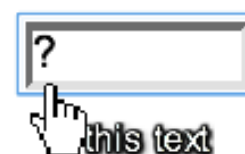
You may change the text attributes and fill of the box using the **Attributes** panel of the Inspector.



## 2. ENTERING INPUT

In Student mode, click anywhere on the box.

In Teacher or Author mode, unless the **Text** tool is selected for text input, the first click will select the box: click again to enter input.



Now type your input.

Press [return](#) or click outside the box to finish entering input.

It is possible to include units with a number.

It is also possible to drag and drop a number into the input box: see the [NUMBER](#) documentation for further details.

6.3



If you type only numbers or pi/Pi/PI (which will become  $\pi$ ) the input will be considered to be a number.

  
this value

  
this value

If your first input into the box is a number, you will not be able to put any text into the box unless you remove the number completely.

If you type e.g. 3/4 this will enter the fraction  $\frac{3}{4}$ .

  
this fraction

See the [NUMBER](#) documentation for further details.

If you type true/True/TRUE or false/False/FALSE the input will be considered to be a Boolean.

  
this boolean

  
this boolean

Any other text, or combination of numbers and text will be taken to be text only.

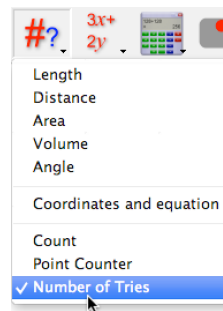
  
this text

  
this text

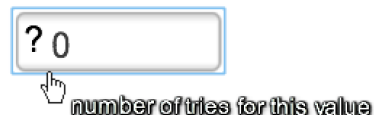
### 3. COUNTING THE NUMBER OF TRIES

It is possible to count the number of times a user has changed an input area. Such a counter is called “the number of tries”. This is useful if, for example, you want to make sure the user has entered some input before moving on, or to count the number of attempts before the user enters the correct value.

Select the **Number of Tries** tool.



Click on the input box.



Click to position the result.



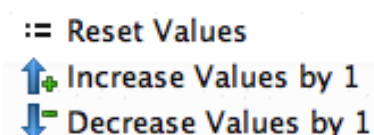
Note that the counter is initially zero, even if you have already made an entry into the input box.



If you now change the input, the counter will increase when you press return or click outside the box.

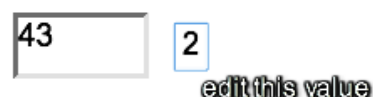


Each of the actions to the right may be applied to the counter. These will enable you to e.g. reset the value of the counter when the page is opened.



See the **ACTIONS** documentation for more details.

The counter may also be edited using the **Number** tool.



#### 4. GIVING FEEDBACK ON THE INPUT

An arithmetic question is given, and the student is expected to put the answer in the input box.


$$47 + 53 = \boxed{?}$$

The student enters their answer.

$$47 + 53 = \boxed{90}$$



As soon as the student presses return or clicks outside the box this feedback appears:

$$47 + 53 = \boxed{90}$$

 Too small

The student tries again, until finally they put in the correct answer. The arrow allows them to move onto the next part of the activity.

$$47 + 53 = \boxed{100}$$

 Well done! It took you 2 attempt(s). 

See the Cabri Author file *inputboxes* pages 2 and 3.

### Setting up this activity

First, use the **Text** tool to enter the question.

Arial 18

$$47 + 53 =$$

You might want to include the numbers from sliders or a random number calculation – see the **NUMBERS** documentation for details.

Now use the **Input Box** tool to create an input box and use the **Number of Tries** tool on this input box.

$$47 + 53 = \boxed{?} 0$$

Use the **Number** tool to put the number 0 near the number of tries counter.

$$47 + 53 = \boxed{?} 0 \quad 0$$

Now select the **Not Equal** tool to test whether the number of tries is not equal to zero.

$$\boxed{?} 0 \quad 0 \quad \text{False}$$

Enter the correct answer to the problem. If the numbers in the question are dynamic, you can use the **Calculator** tool or an expression to calculate the answer. If not, use the **Number** tool.

$$100$$

$$\boxed{?} 0 \quad 0 \quad \text{False}$$

Use the **Equals** and **Less Than** tools to test whether the input  $< 100$ ,  $= 100$ , or is  $> 100$ . If you do not have any input yet, note that all these results will be given by a ?.

100	?	?	?
<input style="border: 1px solid black;" type="text" value="?"/>	0	0	False

Once a number is put into the input box, the Booleans just defined will take the appropriate values of **TRUE** or **FALSE**.

100	True	False	False
<input style="border: 1px solid black;" type="text" value="90"/>	1	0	True

Feedback should be shown dependent on the value of the top three Booleans, but only when the input box has been changed.




Hence use the **Logical AND** tool to find the Booleans representing:  
 feedback and input < correct answer,  
 feedback and input = correct answer,  
 feedback and input > correct answer.


100	True	False	False
<input style="border: 1px solid black;" type="text" value="90"/>	1	0	True
	True	False	False

If you set the number of tries counter back to zero (as you might want to do when the page is entered), these Booleans will change as follows:

100	True	False	False
<input style="border: 1px solid black;" type="text" value="90"/>	0	0	False
	False	False	False

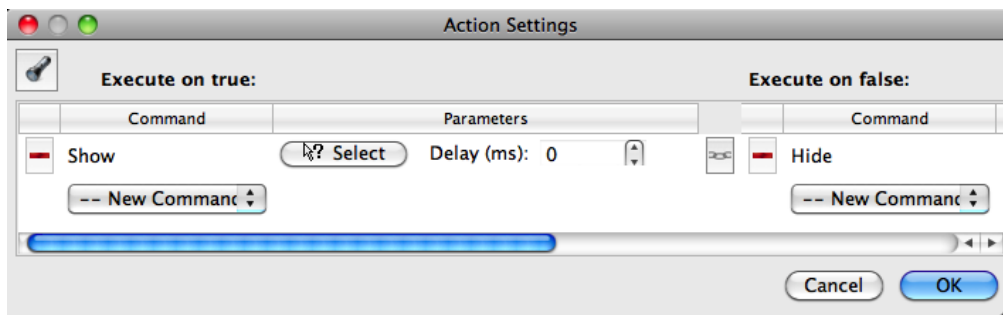
Now create the feedback that you want to have shown for each possibility, in this case by placing images from the **Media – Images** panel in the Inspector on the page, and using the **Text** tool. The number of tries counter has been included in the Correct input.

	Too small
	Well done! It took you 0 attempt(s).
	Too big

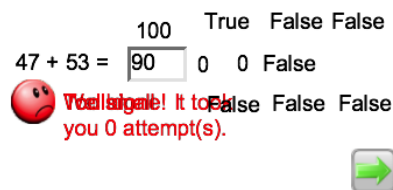


A “next page” button has also been created and placed by the “correct” feedback.

Now add actions to each of the final Booleans to show the appropriate feedback when **TRUE**, and hide it when **FALSE**.



Position the first image and feedback message where you want it to appear and then use the **Arrangement** menu to place the other images and feedback on top of it.



The “next page” button has been placed at the bottom right of the page.

Now right-click on each of the final Booleans and select **Execute 'on false'** to hide the feedback (otherwise Boolean actions are only executed when the Boolean changes state).



Use the **Hide/Show** tool to hide all the numbers and Booleans apart from the question, the textbox, and the number of tries.

$$47 + 53 = \boxed{90} \quad 0$$

Reset the textbox back to “?” and the counter back to 0 if necessary (these actions could be assigned to the page so that they will be performed as the page is opened).

$$47 + 53 = \boxed{?} \quad 0$$

Hide the counter using the **Hide/Show** tool and the activity is ready.

$$47 + 53 = \boxed{?}$$