iPasT

An application geared towards
understanding Pascal's Triangle.

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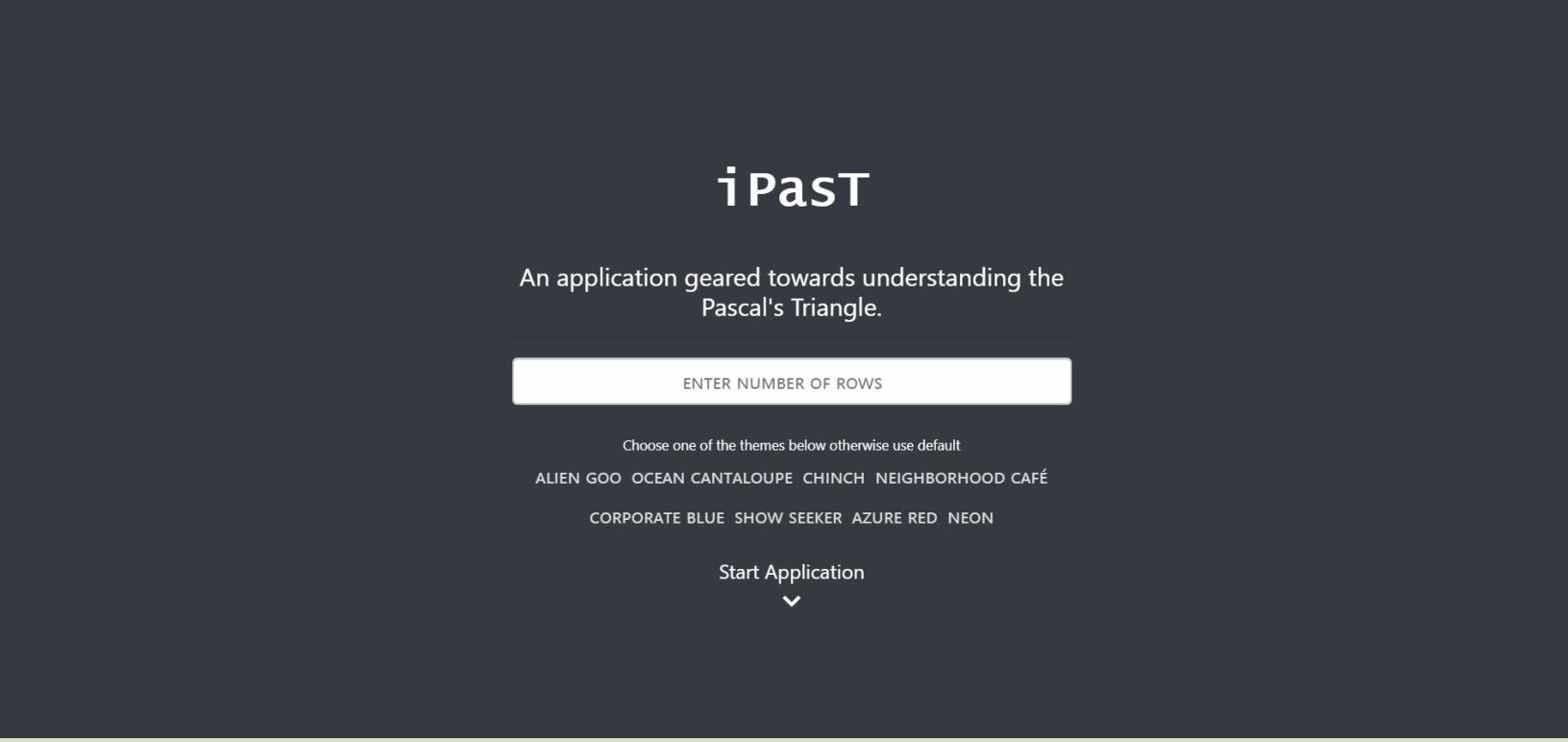
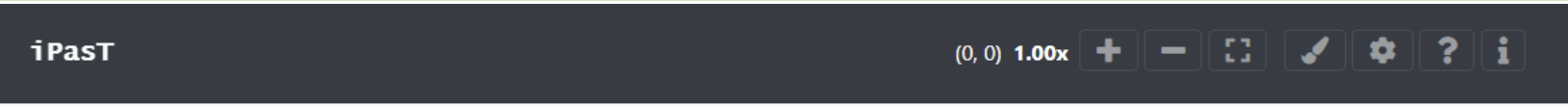


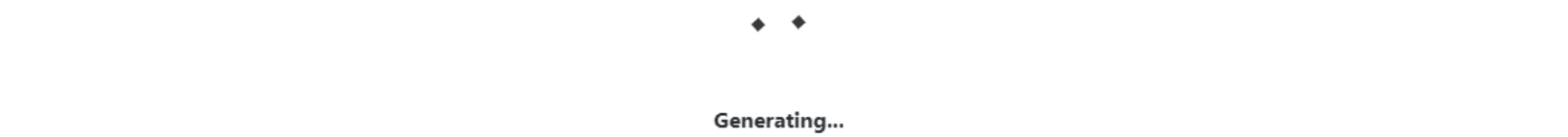
The Landing Page

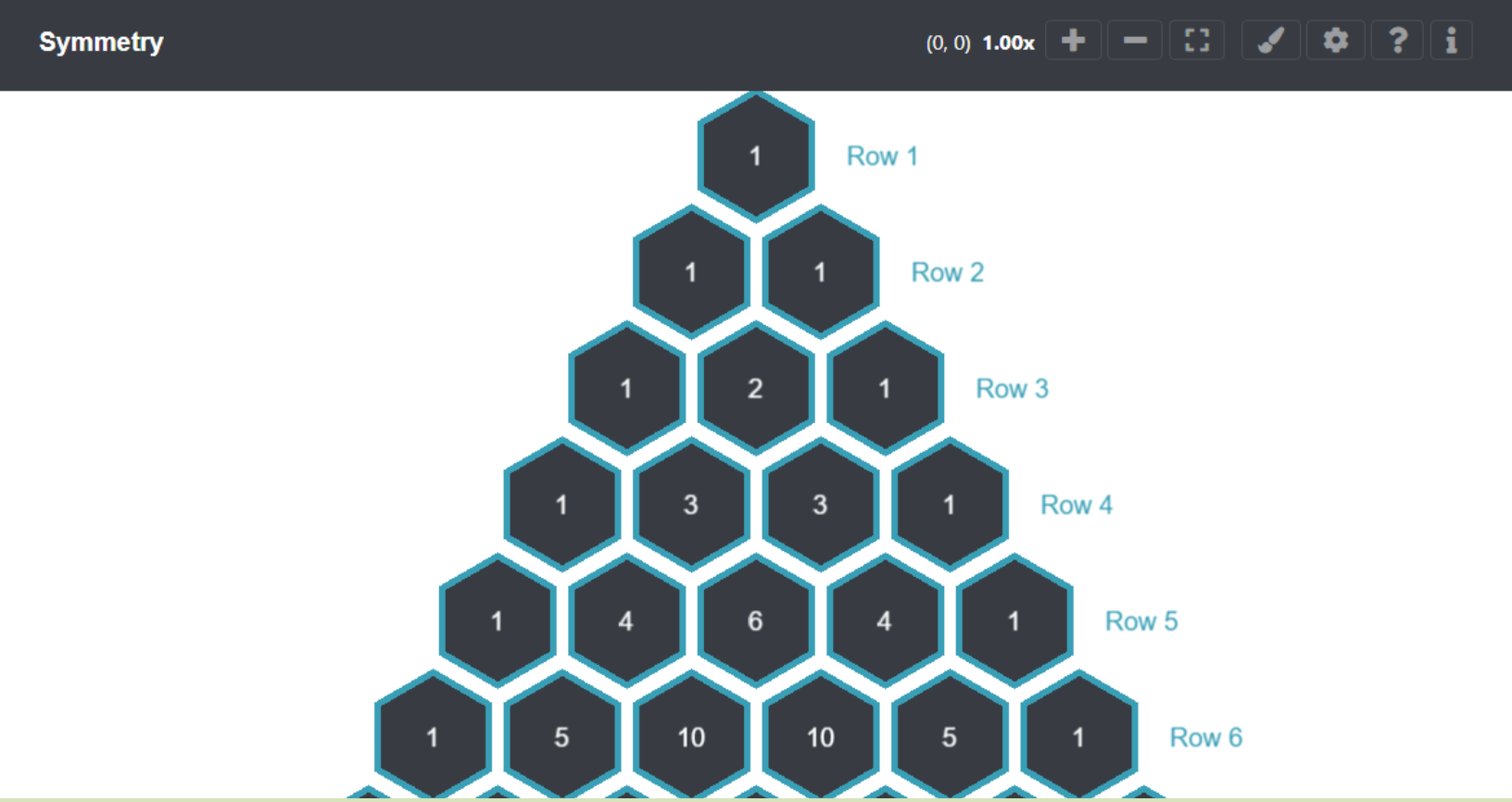
The landing page is what you see upon opening the application. To start generating your first Pascal's Triangle, enter the number of rows you desire to generate on the text field provided. Pressing the Enter key or clicking Start Application will take you to the canvas, where the triangle will be rendered with the default theme colors.

If the user desires to pick a theme, he or she might do so by first entering the number of rows, and then clicking any of the themes listed. In this procedure, there is no need to press the Enter key or click Start Application.



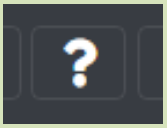
Generating a triangle with a large number of rows takes a relatively longer time to render, in which case you will see this screen.

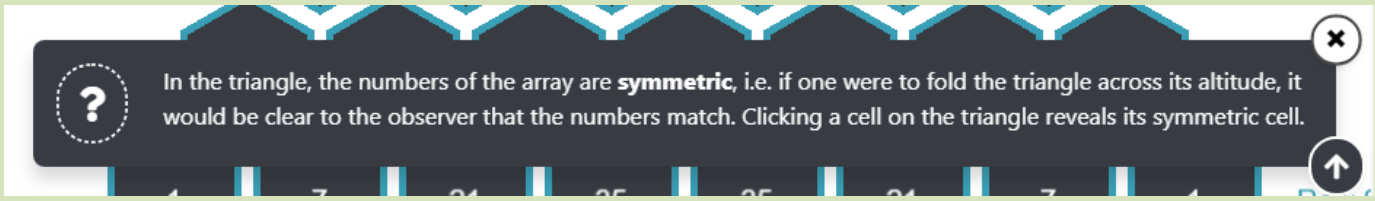




The Application Proper

A generated triangle will look like the one shown in the figure above. The default *mystery* shown is the symmetry property. Clicking the question mark icon (see figure on the right) near the top right corner will prompt the appearance of a field explaining the mystery. In this example, clicking the question mark icon will result to having this at the bottom of the screen:





There are a number of things the user can do in the application proper:

1 | Zoom In and Out

2 | Drag and Reposition

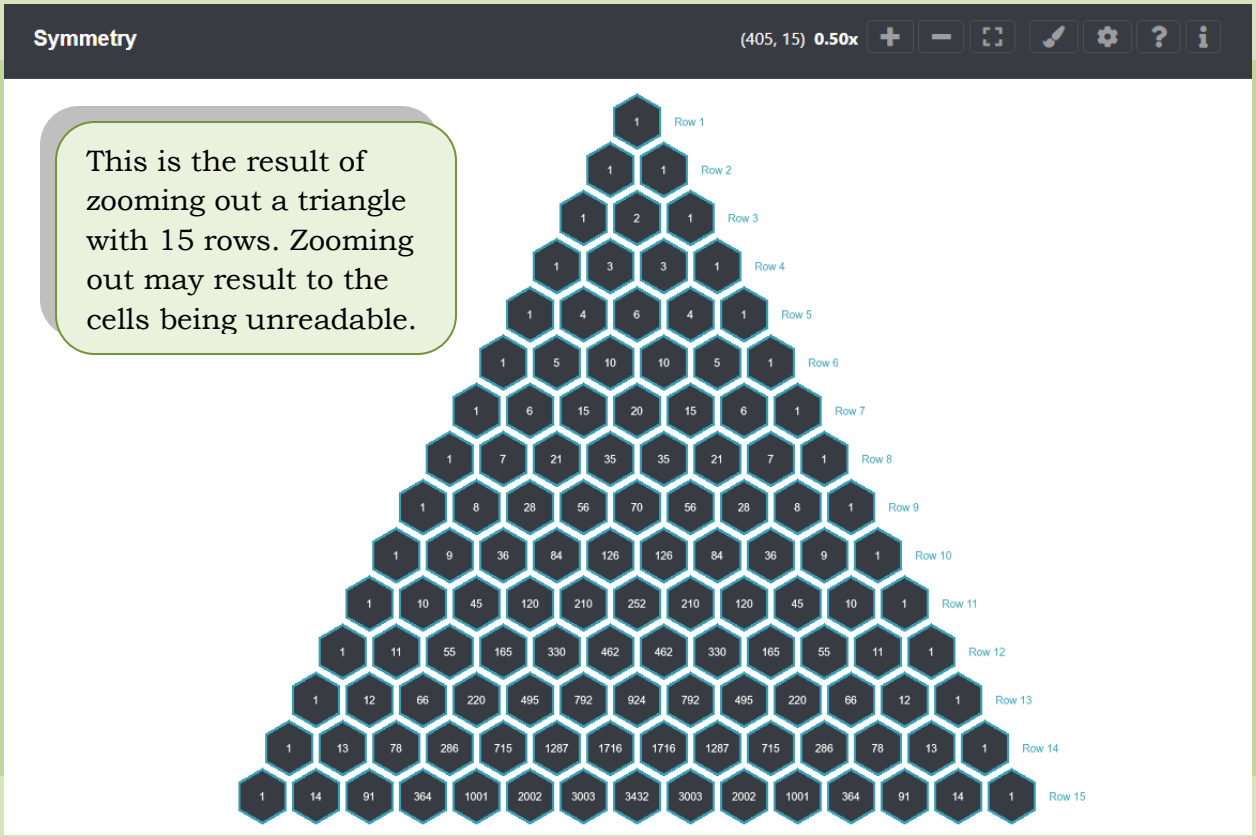
3 | Change Cell Properties

4 | Change Mystery

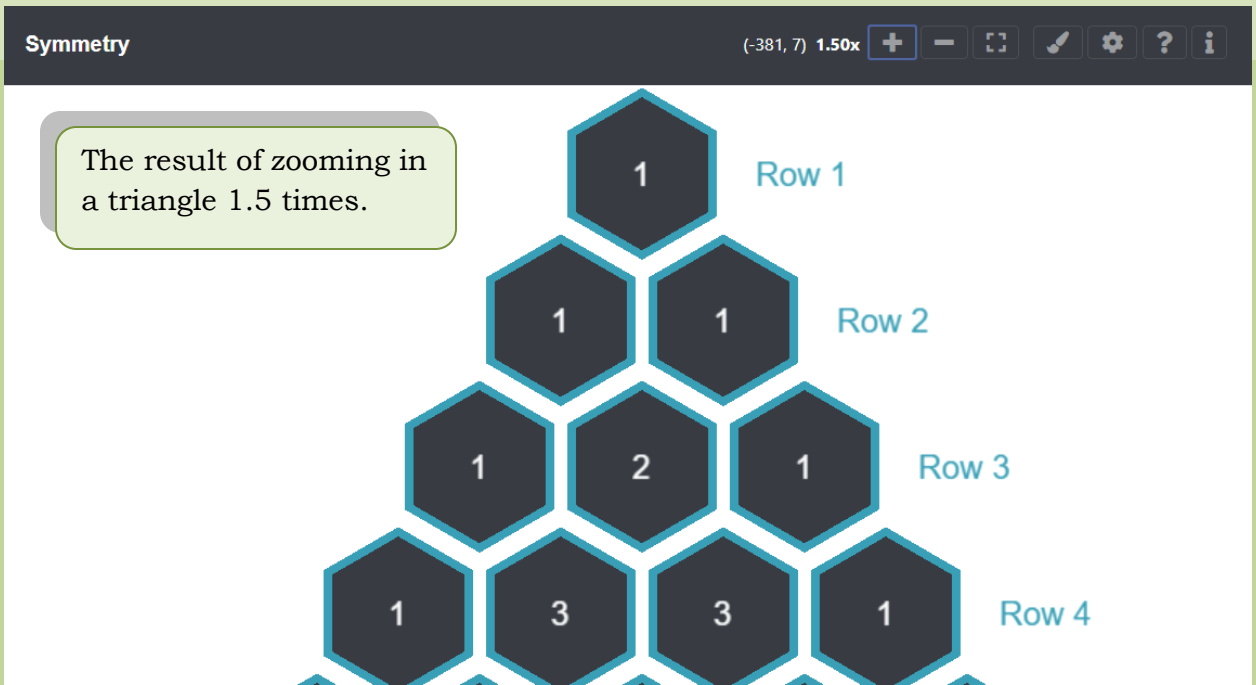
5 | Generate a New Triangle

1 | Zoom In and Out

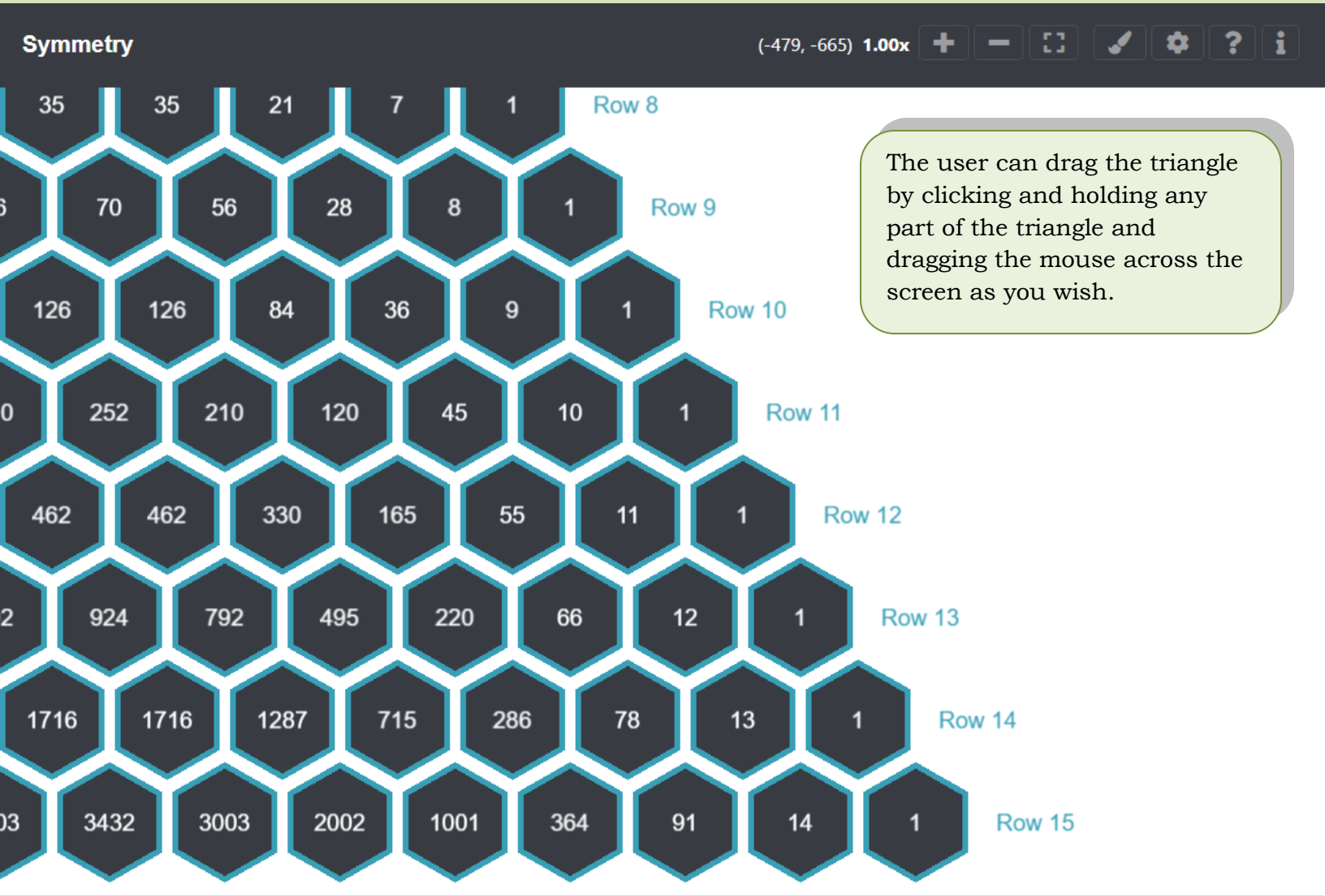
In most cases, the triangle will be too big to fit the user's screen. In order to see the whole triangle, the user may zoom out by clicking the minus icon.



Likewise, the user can also zoom in when the cells are too small to read. This is done by clicking the plus icon.

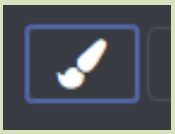


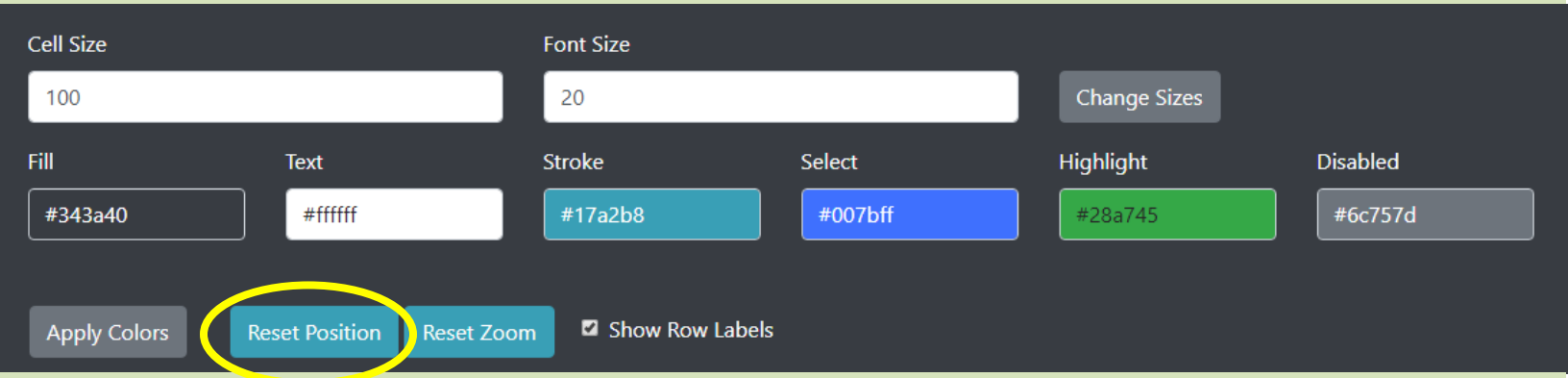
2 | Drag and Reposition



The user can drag the triangle by clicking and holding any part of the triangle and dragging the mouse across the screen as you wish.

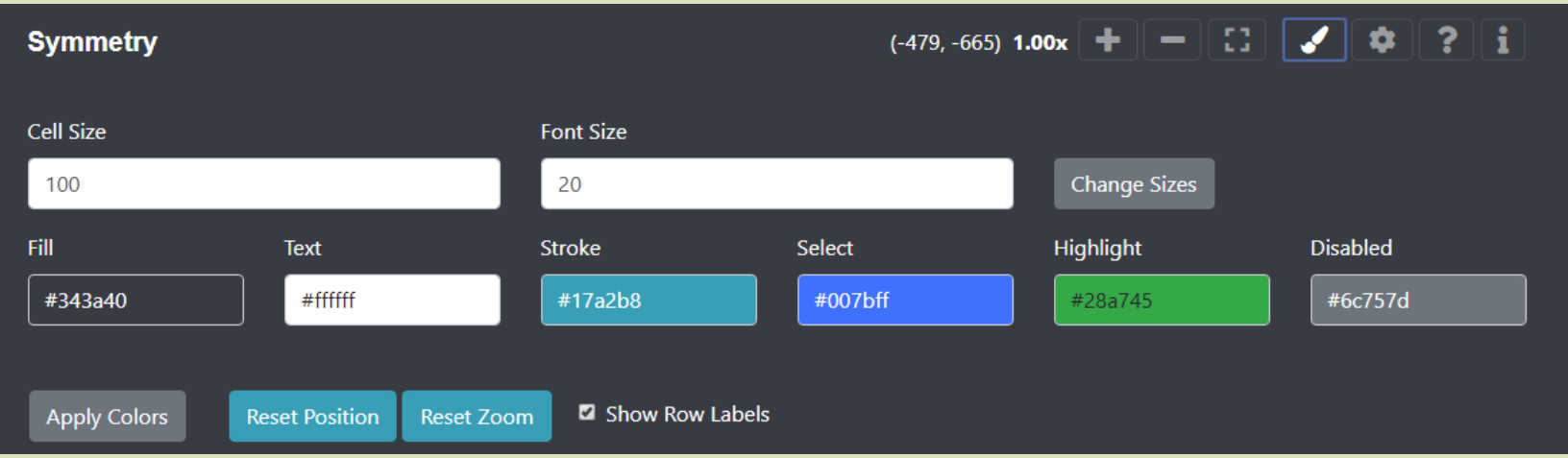
To reposition the triangle means to return it to its original position, with the very first cell of the very first row at the top center of the screen. To do this, click the paintbrush icon (as seen on the right) and click the Reset Position button at the bottom of the menu.





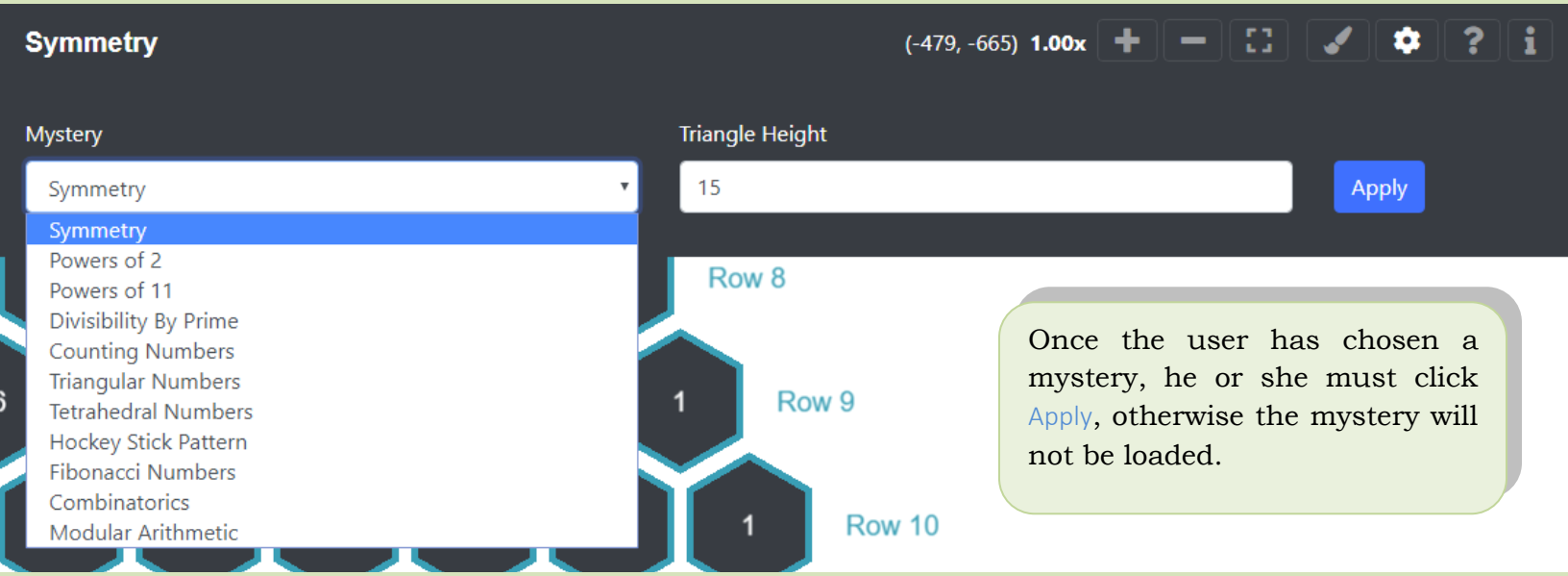
3 | Change Cell Properties

Various cell properties can be changed, including cell size, font size, and cell colors. This can be done by clicking the paintbrush icon (as shown in the previous page). A menu will be shown (see figure below), and the user is free to change the values in all fields as they wish. Note that the user must click Change Sizes or Apply Colors in order for the changes to be seen.



4 | Change Mystery

The *mysteries* are the bulk of the `iPasT` application. Each *mystery* pertains to a certain property or characteristic that the Pascal's Triangle intrinsically contains. To see all available *mysteries*, click the gear icon (see the image to the right). A drop down *mystery* menu will be shown. The initial *mystery* upon loading the program is the symmetry property.



5 | Generate a New Triangle

When the user wants to change the triangle's number of rows, he or she must generate a new triangle. To do this, click the gear icon (as shown in the previous page) and enter the new number of rows in the field labeled Triangle Height. The user must then click Apply, otherwise the change will not happen.