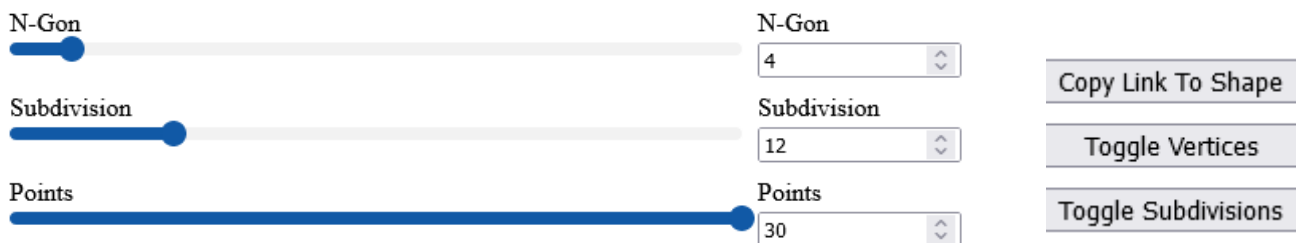


Changing Numbers in the Web Version

There are five methods to change numbers in the web version for n , S , and P .

1. Click on the blue ball to the left of the number and drag it right or left.
 - a. Scrollbar bounds: $1 \leq n \leq 36$; $1 \leq S \leq 50$; $1 \leq P \leq nS/2$.
2. Click on the line to the left or right of the blue ball's location to lower or raise the number.
3. Use the \blacktriangleleft arrows to the right of the number to either scroll up or scroll down the number.
 - a. \blacktriangleleft bounds: There are no set bounds using these scrollbars but processing large numbers takes longer.
4. Highlight the number and change it by typing in a new number.
 - a. That new number need not be close to the previous number so this allows you to move very quickly to a new value.
 - b. If following this method, you must highlight the old number, or it will simply add it to the end of the existing number.
 - i. For example, if you want to change n from 4 to 50, if you click next to the 4 and type 50, the new n will be 450. However, if you highlight the 4 then type 50 it will change to 50.
 - c. This method works well if you are trying to examine functional relations between parameters like those explored [here](#) as discrete changes are most easily achieved with this method of data entry.
5. Click on the box of the parameter you want to change. Once the box is surrounded by a blue line, that number is active and can be changed using the \wedge and \vee directional arrow keys on your keyboard.
 - a. The keyboard arrow key need not be tapped one at a time. If you continue to depress the up key, for example, the parameter will increase at a steady rate.
 - b. In fact, it is often easier to use these arrow keys than the small \blacktriangleleft arrows to the right of the number as it is easy to slip from one to the other due to the size of those up and down arrows.



Toggles. The two toggles are useful for pedagogical purposes. *Toggle Vertices* produces the numbers from 0 (in a blue dot) and 1 to $n-1$ (in green dots) at vertices, and *Toggle Subdivisions* produces S purple • subdivision endpoints on each line of the vertex frame, VF. If you have either on as you scroll through values of n , S , and J , you will quickly be able to see the vertex frame implied by the subdivision values and jump patterns. To see the VF, set $S = P$ and the result is always the VF.

Saving an image. You can use the *Copy Link to Shape* button to copy a link, and by right clicking on the image you can save it using *Save Image As*. This is how images and links were saved for this book.

Entering jump information. The open-ended nature of jumps (discussed in the *Web Jumps explainer*) means that there is no scrollbar to the left of the fourth parameter in the model, J , therefore the first two methods discussed above do not apply. J can be changed using any of the last three methods listed above.