

Please either submit a word document or a photo of your work to Canvas. You may use another piece of paper to record your responses or type directly into this form, attaching photos of your diagrams.

The numbers in the parentheses correspond to segments of the video: <https://vimeo.com/62145217>

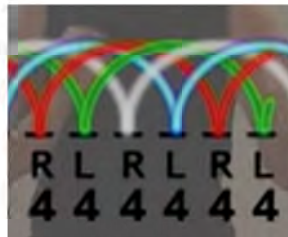
**1.) Number of balls: 3 (3:04)**

- a. What is the definition of siteswap?
  - (i) What do the letters represent?
  - (ii) What do the numbers represent?
  - (iii) What do the colors represent?
  - (iv) Describe what is being represented by the red arc? What is happening?
- b. Here is the space-time diagram for 3-ball cascade (3:04). Describe what is going on here.
  - (i) What do the letters represent?
  - (ii) What do the numbers represent?
  - (iii) What do the colors represent?
  - (iv) Describe what is being represented by the red arc? What is happening?



**2.) Number of balls: 4 (4:41)**

- a. Below is a pattern for **4-ball juggling**.
  - (i) Using this diagram, describe what is going on. If you can, model the juggling.



- (ii) Write **two similarities and one difference** between the 3-ball cascade and this way of juggling 4-balls.

Similarities (2)

Difference

- 3.) **Number of balls: 5 (6:20)**. Take note of Gandini's recommendations for juggling a 5-ball cascade.

- a. What are the similarities and differences between juggling a 5-ball and a 3-ball cascade?

Similarities

Differences

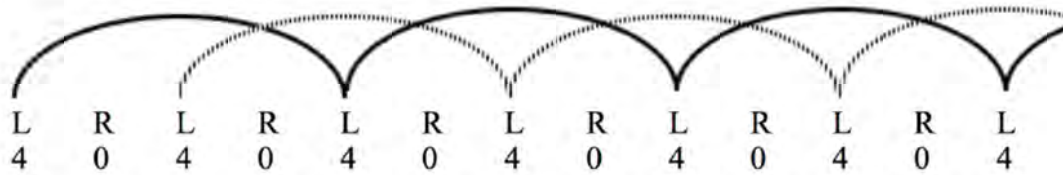
- b. Draw a space-time diagram using siteswap notation for the 5-ball cascade. Use the same colors as the balls in the video if possible.

- 4.) **Number of balls: 2**

- a. Two-ball fountain: Draw a space-time diagram with siteswap notation and a verbal description of what the juggling looks like. **(7:18)**

- b. In 1-2 sentences explain the difference between active and lazy 2-ball juggling. (8:50)

- c. Here is another pattern for 2-ball juggling. Using this diagram, describe what is going on. What is the left hand doing? What is the right hand doing? If you can, model the juggling.



**5.) Number of balls: 1**

Draw a space-time diagram with siteswap notation and a verbal description of what the juggling looks like, modelling the juggling that the diagram represents. (9:57)

**6.) Number of balls:0 (10:46).**

Draw a space-time diagram(s) with siteswap notation and a verbal description of what the juggling looks like. Model the juggling.

(Skip to 20:53)

**7.) Number of balls: 2. (21:30)**

Explain why the space-time diagram for this juggling pattern makes sense.

(Skip to 23:36)

**8.) Number of balls: 3. 3-ball shower. (24:20)**



Explain why the space-time diagram for the 3-ball shower makes sense.

- 9.) Draw a space-time diagram for 5,4,6.** What do you notice? What can you conclude from this?