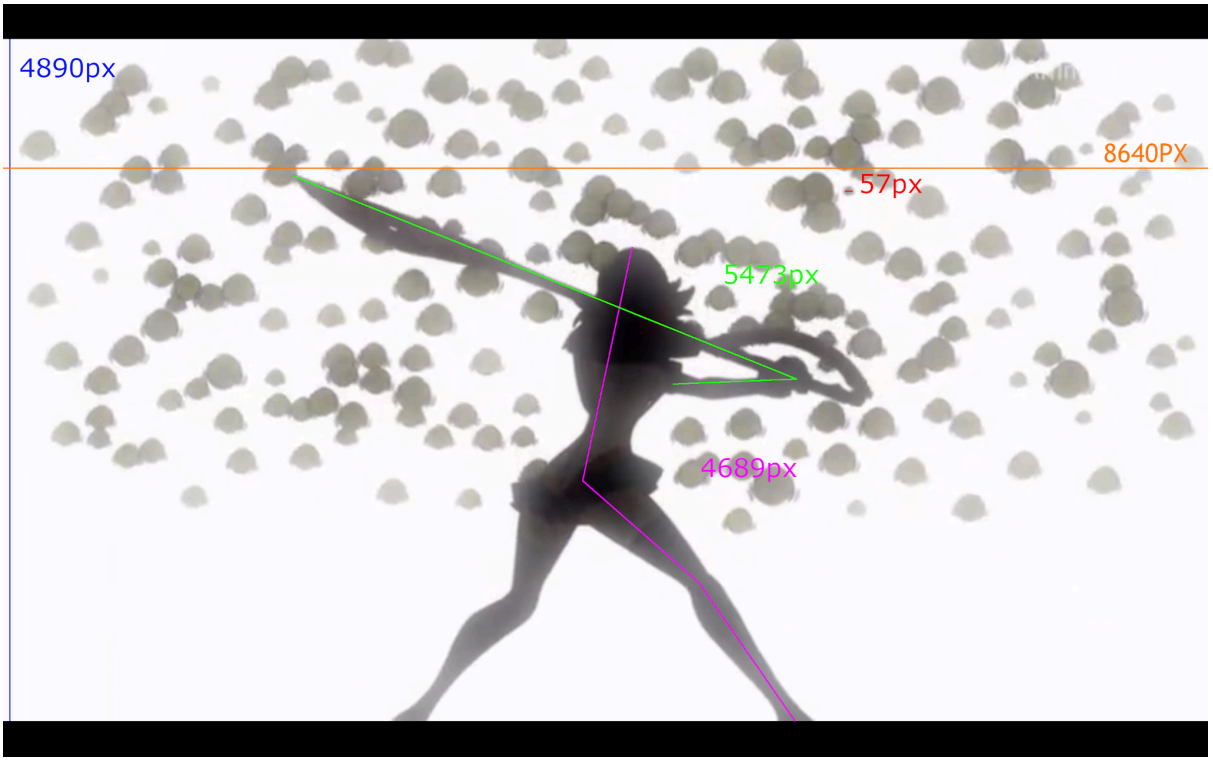
Background info: Tennis balls on average are about 0.0686 in diameter (as stated in the previous calc), and Ryuko Matoi is approximately 5'3" (1.60m).

Here we go.



First order of business, finding the distance when Ryuko started to slice the balls to find the time she took to slice them all. We shall do this by first seeing how far Omiko and Ryuko were.

318px = 0.2 meters
4974px = 3.13 meters



Neat. So, next shot to see how far the balls are the moment she started slicing them.

Okay... Angsizing:

Distance Ryuko is from the POV = 1.60m * 4890px/[4689px*2*tan(70deg/2)] = 1.2 meters

Distance the farthest Tennis ball is from the POV = 0.0686m * 4890px/[57px*2*tan(70deg/2)] = 4.20 meters

Distance Ryuko is from the Tennis ball = 4.20 meters - 1.2 meters = 3 meters

To find the distance the Tennis balls traveled before they were sliced, we shall subtract the previous 2 distances.

3.12 meters - 3 meters = 0.12 meters

To find the timeframe in which Ryuko would've had to slice the Tennis Balls:

0.12 meters / 73.167 m/s = 0.00164 seconds

As for the distance covered? I will assume a low-end and a high-end. Low-end assuming she sliced the Tennis Ball 5 times and high-end assuming she sliced the balls into strings. But first, one has to consider that Ryuko would've also had to move a horizontal distance, since some of the balls were straight up out of reach for her.

57px = 0.0686 meters
8640px = 10.4 meters

Now for calculating the distance covered.

Low-end:

4689px = 1.60 meters
5473px = 1.87 meters

C = 1.87m * 2 * 3.141592654 * (140/360) = 4.57 meters

Ryuko swung 5 times per ball, and there were 220 balls. Sooooo

4.57 meters * 220 * 5 = 5027 meters

Add 10 meters to get 5037 meters.

5037 meters / 0.00164 seconds = 3,071,341.5 m/s or 0.0102c (**Sub-Relativistic**)

High-end:





This may technically be a low-ball for even this type of accounting since we see the balls burst into more strings lol

3px = 1 thread

310px = 103.33333 threads

4.57 meters * 103.33333 = 472.23 meters

220 balls * 472.23 meters = 103891 meters

103891 meters / 0.00164 seconds = 63348373 m/s or 0.21c (**Relativistic**)

I guess that's it.