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DSP Coding Project 1

In order to obtain valid values within the range of x and h, we must move backwards instead of forwards. Otherwise, the code will break and we will not be able to receive results.

As a is increased, the decay becomes slower, while decay is faster if a is decreased. If a > 1 then the graph becomes increasing instead of decreasing. As you increase N, the rising section of the output graph increases to the value of N.

After altering either both the shape and/or the intensity of the h function, the algorithm still works as expected. For example, I used a linear impulse function with slope of 1 (shifting a triangle over the input graph) and received an output that we would expect. The difference between the triangle and square shapes is the rate at which the convolution sum is increasing since the triangle obviously will have less area than the square as it interacts with the input function. Using an exponential function also had effects on the output graph while still working within the algorithm.