

## Module 4.2

At heart convolution is just a fancy zip -> reduce, just like we have seen all semester. However, mastering the convolution is all about understanding and gaining intuition into shapes. This takes a little practice to get used to.

In this quiz we are going to practice computing one step of the 1d convolution with input channels.

```
input = torch.tensor([[1, 2, 1, 2, 3, 4],  
                      [2, 1, 3, 2, 3, 2.]])
```

```
weights = torch.tensor([[3, 2, 1],  
                        [1, 2, 3.]])
```

Here `input.shape` is ``input_channels x width`` and `weights` is ``input_channels x kernel_width``. There is only 1 output channel.

1

1 point



Using our convention that output width is the same as input width, what is the size of the output tensor?

2

1 point



What is the value of `output[2,0]`? (compute that part of the 1D convolution.)