

Solution

The answer is **2x2x5**. Here's how it's calculated using the formula:

$$(4 - 2)/2 + 1 = 2$$

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The depth stays the same.

Here's the corresponding code:

```
input = tf.placeholder(tf.float32, (None, 4, 4, 5))
filter_shape = [1, 2, 2, 1]
strides = [1, 2, 2, 1]
padding = 'VALID'
pool = tf.nn.max_pool(input, filter_shape, strides, padding)
```

The output shape of **pool** will be [1, 2, 2, 5], even if **padding** is changed to **'SAME'**.