Congratulations! You passed!

Grade received 91.66% **Latest Submission Grade** 91.67% **To pass** 80% or higher

Go to next item

1. A *Tensor* is a flexible data structure that can hold data in a variety of different ways. **1 / 1 point**

- False
- True

Correct
Correct!

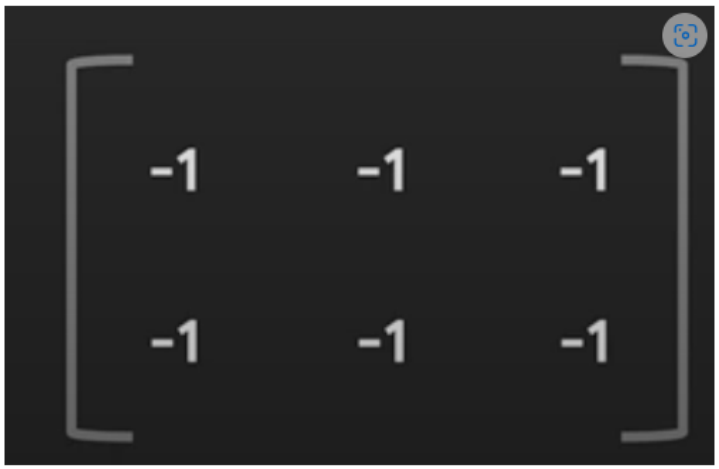
2. A Tensor can be a vector, matrix or multi-dimensional array but not a scalar **1 / 1 point**

- False
- True

Correct
Correct! A tensor can be a scalar

3. You want to create a tensor object that is a 2 by 3 matrix containing all -1 values. You also want to be able to modify the values inside the tensor in the future. Which of the following lines of code should you use? Check all that are true.

0.5 / 1 point



- [ ] tf.constant([-1, -1, -1, -1, -1, -1], shape=[2, 3])
- [x] tf.Variable([-1, -1, -1, -1, -1, -1], tf.int32, shape=[2,3])

This should not be selected
Incorrect! The shape will be derived from the initial value, which has dimensions (6,). When using tf.Variable, setting the shape to (2,3) will not reshape the initial value to a 2 by 3 matrix, and will result in an error message.

- [ ] tf.Variable([[-1, -1, -1], [-1, -1, -1]], shape=[2, 3])
- [x] tf.Variable([[-1, -1, -1], [-1, -1, -1]], dtype=tf.int32)

Correct
Correct!

4. One type of mode in TensorFlow allows for immediate evaluation of values. What is this mode called? **1 / 1 point**

- ○ Graph mode
- ◉ Eager mode

Correct
Correct! In general, this way of handling code (whether it's in TensorFlow or any other programming language) is called "eager execution".

5. Consider the following code: **1 / 1 point**

```
a = tf.constant([[5,7], [2, 1]])
b = tf.add(a,2)
c = b ** 2
d =tf.reduce_sum(c)
print(d)
```

The output of the code *could* be: tf.Tensor(*x*, shape=(), dtype=int32)

What is the value of "x" in this case ? Enter in the box below. Enter "0" if you think the code above will run into some kind of error.

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Correct
Correct!

6. What is the name of the TensorFlow API which handles automatic differentiation? **1 / 1 point**

- ○ Gradient
- ○ AutoDiff
- ◉ GradientTape
- ○ TapeGradient

Correct
Correct!