



✓ **Congratulations! You passed!**
TO PASS 80% or higher

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Tensors and Gradient Tape

LATEST SUBMISSION GRADE

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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

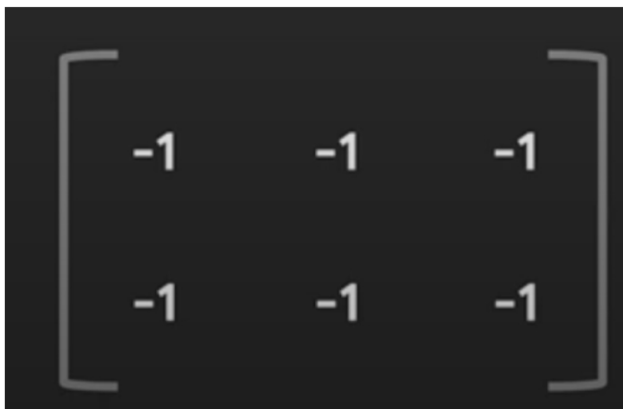
1 / 1 point

- ☐ True
- ☒ False

✓ **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.

0.75 / 1 point



☒ `tf.Variable([[-1, -1, -1], [-1, -1, -1]], tf.int32)`

✓ **Correct**
Correct!

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

You didn't select all the correct answers

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

1 / 1 point

- ☒ Eager mode
- ☐ Graph 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.

155

✓ Correct

Correct!

6. What is the name of the TensorFlow API which handles automatic differentiation?

1 / 1 point

- ☐ Gradient
- ☐ AutoDiff
- ☐ TapeGradient
- ☒ GradientTape

✓ Correct

Correct!