1. What is the correct syntax for the first layer in a convolutional neural network that takes an MNIST (28x28 monochrome) input?

1 / 1 point

```
model.add(tf.layers.conv2d({inputShape: [28, 28, 1], kernelSize: 3, filters: 8,
  activation: 'relu'}));
```

```
model.add(tf.layers.conv({inputShape: (28, 28, 1), kernelSize: 3, filters: 8,
  activation: 'relu'}));
```

```
model.add(tf.layers.conv2d({inputShape: [28, 28], kernelSize: 3, filters: 8,
  activation: 'relu'}));
```

```
model.add(tf.layers.conv({inputShape: [28, 28, 1], kernelSize: 3, filters: 8,
  activation: 'relu'}));
```

✓ **Correct**

2. What is the correct syntax for adding a maxPooling2D layer to a Convolutional neural network in JavaScript? 1 / 1 point

```
model.add(tf.layers.maxPooling2d({poolSize: [2, 2]}));
```

```
model.add(tf.layers.maxPooling2D({poolSize =  [2, 2]}));
```

```
model.add(tf.layers.maxPooling2D({poolSize: [2, 2]}));
```

```
model.add(tf.layers.maxPooling2d({poolSize = [2, 2]}));
```

✓ **Correct**

3. What is the correct syntax for compiling a model with an optimizer, loss function and metrics? 1 / 1 point

```
model.compile({  optimizer: tf.train.adam(); loss: 'categoricalCrossentropy';
  metrics: ['accuracy']});
```

```
model.compile({  tf.optimizer: tf.train.adam(), tf.loss:
  'categoricalCrossentropy', tf.metrics: ['accuracy']});
```

```
model.compile({  optimizer: tf.train.adam(), loss: 'categoricalCrossentropy',
  metrics: ['accuracy']});
```

```
model.compile({  optimizer = tf.train.adam(), loss = 'categoricalCrossentropy',
  metrics = ['accuracy']});
```

✓ **Correct**

4. How do you correctly pass a set of validation data called textXs and testYs to the model.fit method in JavaScript? 0 / 1 point

- Use validationData = [testXs, testYs] in the list of parameters to model.fit
- Use validationData: [testXs, testYs] in the list of parameters sent as the third parameter to model.fit
- Use validationData= [testXs, testYs] and pass it to the model.fit method
- Use validationData: [testXs, testYs] in the list of parameters to model.fit

! **Incorrect**

5. How do you get the built in callbacks visualizer with TensorFlow.js? 1 / 1 point

- ○ Include the tfjs-vis script and it will work automatically
- ○ Include the tfjs-vis script, call show.fitCallbacks() on the tfvis object
- ◉ Include the tfjs-vis script, set a callback in model.fit, and set it to a const that called show.fitCallbacks() on the tfvis object
- ○ Include the tfjs-vis script, set a callback in model.fit and it will work automatically

✓ **Correct**

6. If you want to see loss, validation loss, accuracy and validation accuracy on each epoch while training, how do you do this? 1 / 1 point

- ○ Create a list containing [1, 1, 1, 1] indicating that you want those 4 values to be true and pass it to the fitCallbacks() as a parameter
- ○ Create a list containing text values [“loss=true”, “val_loss=true”, “acc=true”, “val_acc=true”] and pass it to fitCallbacks() as a parameter
- ◉ Create a list containing text values with the names of the analytics you want to capture, i.e. [‘loss’, ‘val_loss’, ‘acc’, ‘val_acc’] and pass it to fitCallbacks() as a parameter
- ○ Create a list setting loss=true, val_loss=true, acc=true, val_acc=true, and pass it to the fitCallbacks() as a parameter

✓ **Correct**

7. When using a dataset like MNIST or FashionMNIST, why is it advisable to use a sprite sheet containing all the images? 1 / 1 point

- (●) It prevents excessive multiple HTTP calls to download the data
- ( ) It makes the data more secure
- ( ) It keeps the data in the native JS format
- ( ) It doesn't require any additional pre-processing

✓ **Correct**

8. What is the role of tf.tidy() in TensorFlow.js? 1 / 1 point

- ( ) It shuts down tensorflow when done, cleaning up all memory
- ( ) When it is executed, it removes everything tensorflow from the browser memory and cache
- ( ) When it is executed it clears memory for new tensors
- (●) When it is executed, it cleans up all intermediate tensors allocated by a function except those returned by the function

✓ **Correct**