1. For the the following code:

model = Sequential([

Dense(units=25, activation="sigmoid"),

Dense(units=15, activation="sigmoid"),

Dense(units=10, activation="sigmoid"),

Dense(units=1, activation="sigmoid")])

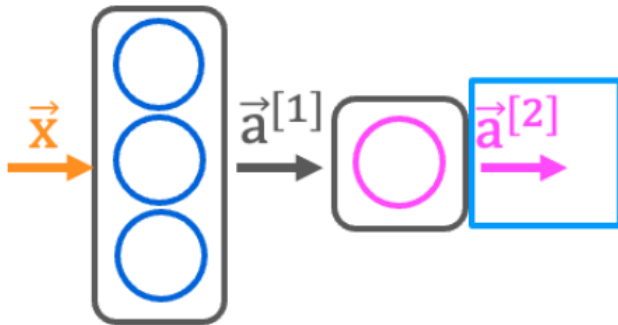This code will define a neural network with how many layers?

- ○ 25
- ○ 3
- ○ 5
- ◉ 4

✓ **Correct**
Yes! Each call to the "Dense" function defines a layer of the neural network.

2.

```
x = np.array([[200.0, 17.0]])
layer_1 = Dense(units=3, activation='sigmoid')
a1 = layer_1(x)



layer_2 = Dense(units=1, activation='sigmoid')
a2 = layer_2(a1)
```

How do you define the second layer of a neural network that has 4 neurons and a sigmoid activation?

- ◉ Dense(units=4, activation='sigmoid')
- ○ Dense(layer=2, units=4, activation = 'sigmoid')
- ○ Dense(units=4)
- ○ Dense(units=[4], activation=['sigmoid'])

✓ **Correct**
Yes! This will have 4 neurons and a sigmoid activation.

Feature vectors

temperature (Celsius)	duration (minutes)	Good coffee? (1/0)
200.0	17.0	1
425.0	18.5	0
...	...	...

```
x = np.array([[200.0, 17.0]])

[[200.0, 17.0]]
```

If the input features are temperature (in Celsius) and duration (in minutes), how do you write the code for the first feature vector x shown above?

○ x = np.array([[200.0],[17.0]])

○ x = np.array([['200.0', '17.0']])

○ x = np.array([[200.0 + 17.0]])

◉ x = np.array([[200.0, 17.0]])

✓ **Correct**
Yes! A row contains all the features of a training example. Each column is a feature.