In [22]:
```
import numpy as np
import matplotlib.pyplot as plt
import tensorflow as tf
from tensorflow.keras.layers import Dense
```

1- Define inputs

In [23]:
```
x = np.array([17.0,200.0])
```

2- Define layer_1

In [24]:
```
layer_1 = Dense(units=3, activation='sigmoid')
```

3- Reshape the input array

In [25]:
```
x_reshaped = x[np.newaxis, :]
print(x_reshaped)
```

```
[[ 17. 200.]]
```

4- Compute activation $\vec{a}^{[1]}$

In [26]:
```
a1 = layer_1(x_reshaped)
print(a1)
```

```
tf.Tensor([[0. 0. 1.]], shape=(1, 3), dtype=float32)
```

5- Compute the second layer

In [27]:
```
layer_2 = Dense(units=1, activation='sigmoid')
```

6- Compute $\vec{a}^{[2]}$

In [28]:
```
a2 = layer_2(a1)
print(a2)
```

```
tf.Tensor([[0.71180755]], shape=(1, 1), dtype=float32)
```

In [29]:
```
if a2 >= 0.5:
    print('y=1')
else:
    print('y=0')
```

```
y=1
```