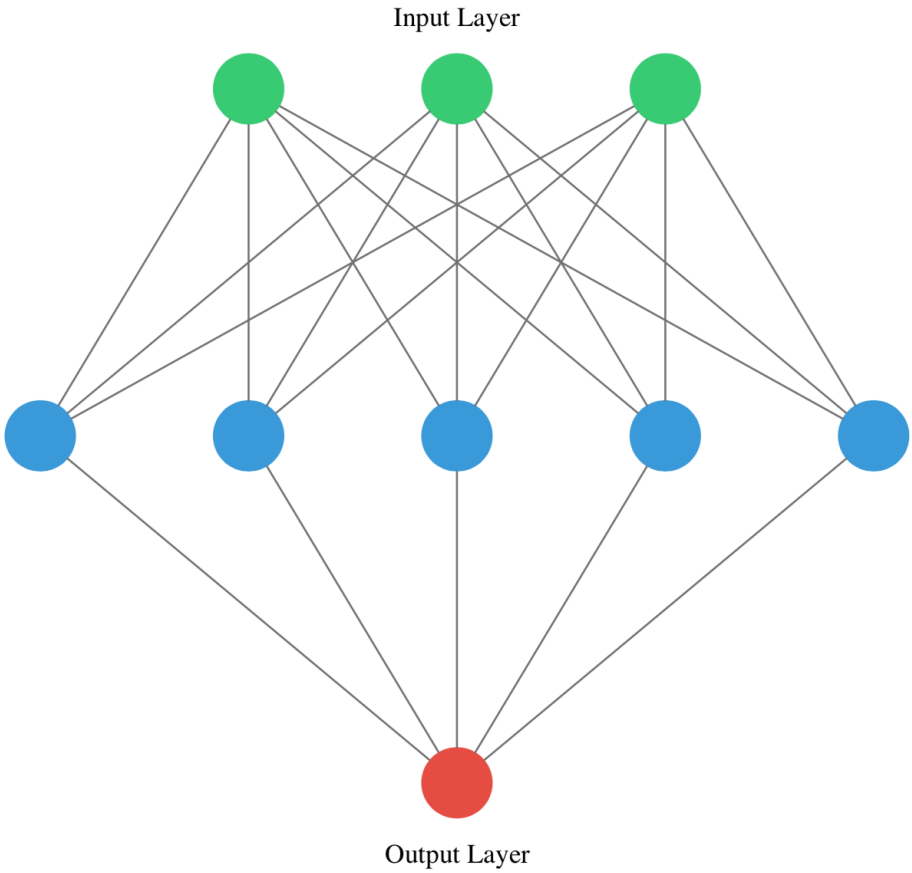
Counting parameters

You've just created a neural network. Create a new one now and take some time to think about the weights of each layer. The Keras `Dense` layer and the `Sequential` model are already loaded for you to use.

This is the network you will be creating:



- Instantiate a new `Sequential()` model.
- Add a `Dense()` layer with five neurons and three neurons as input.
- Add a final dense layer with one neuron and no activation.

```
# Instantiate a new Sequential model

model = Sequential()
```

```
# Add a Dense layer with five neurons and three inputs
model.add(Dense(5, input_shape=(3,), activation="relu"))

# Add a final Dense layer with one neuron and no activation
model.add(Dense(1))

# Summarize your model
model.summary()
```

Question

Given the `model` you just built, which answer is correct regarding the number of weights (parameters) in the **hidden layer**?

Possible Answers

There are 15 parameters, 3 for every neuron in the hidden layer.

There are 20 parameters, 15 from the connection of our input layer to our hidden layer and 5 from the bias weight of each neuron in the hidden layer.

There are 20 parameters, no bias weights were needed in this simple model.

Answer : There are 20 parameters, 15 from the connection of our input layer to our hidden layer and 5 from the bias weight of each neuron in the hidden layer.