# Artificial Neural Networks

**LATEST SUBMISSION GRADE**

100%

1. The weights and biases in a neural network are optimized using:   **1 / 1 point**

   ○ Activation Descent

   ⦿ Gradient Descent

   ○ Vanishing Gradient

   ○ Activation Function

   ○ Logistic Descent

   ✓ **Correct**
   Correct

2. For a cost function, $J = \sum_{i=1}^{m} (z_i - wx_i - b)^2$, that we would like to minimize, which of the following expressions represent updating the parameter, $w$, using gradient descent?   **1 / 1 point**
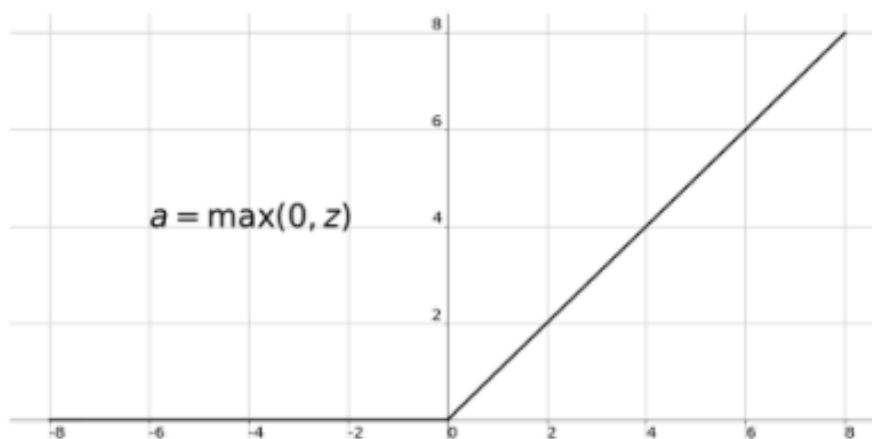
   ○ $w \rightarrow w + b - \eta * \frac{\partial J}{\partial w}$

   ○ $w \rightarrow w + \eta * \frac{\partial J}{\partial w}$

   ⦿ $w \rightarrow w - \eta * \frac{\partial J}{\partial w}$

   ○ $w \rightarrow w - \eta * x \frac{\partial J}{\partial w}$

   ○ $w \rightarrow w - \eta * b \frac{\partial J}{\partial w}$

   ✓ **Correct**
   Correct

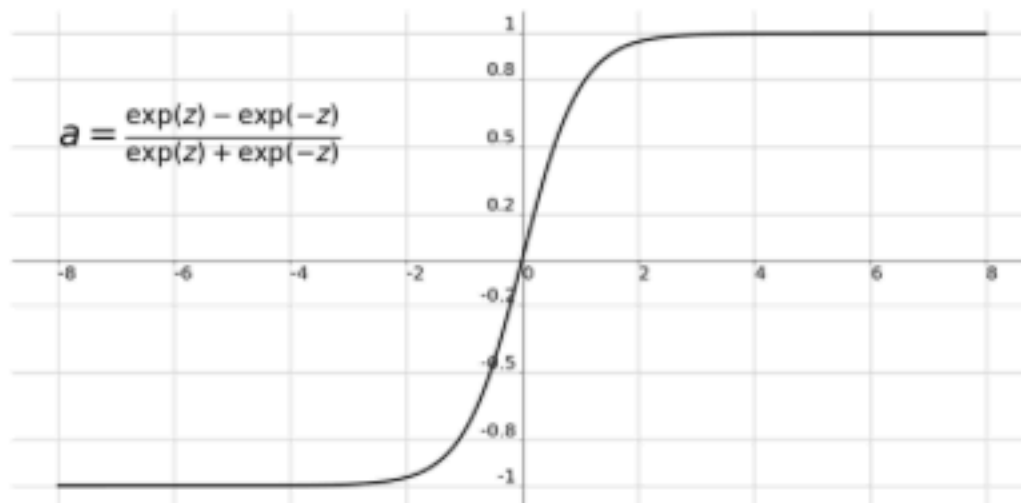3. What type of activation function is this?   **1 / 1 point**



$a = \max(0, z)$

   ○ Hyperbolic Tangent Function

   ○ Leaky ReLU

   ○ Linear Function

   ○ Sigmoid Function

   ○ Binary Function

   ⦿ ReLU

   ✓ **Correct**
   Correct

4. What type of activation function is this?

$$a = \frac{\exp(z) - \exp(-z)}{\exp(z) + \exp(-z)}$$

○ ReLU

○ Leaky ReLU

○ Binary Function

○ Sigmoid Function

○ Linear Function

◉ Hyperbolic Tangent Function

✓ **Correct**
   Correct

5. Softmax activation function is most commonly used in hidden layers?

○ True

◉ False

✓ **Correct**
   Correct.