# Week 1 Assessment

## 1. What is Machine Learning (ML)?

Machine Learning is a subset of Artificial Intelligence that enables systems to automatically learn and improve from experience without being explicitly programmed. It focuses on developing algorithms that can analyze data, recognize patterns, and make decisions with minimal human intervention.

## 2. What is a Supervised Machine Learning Algorithm?

Supervised Machine Learning involves training a model on a labeled dataset, meaning the data includes both input features and the correct output. The model learns to predict outputs from inputs. Common supervised algorithms include regression and classification methods.

## 3. What is Regression and Classification?

- Regression: A supervised learning technique used to predict continuous numerical values. Example: predicting crop yield.  
- Classification: A supervised learning technique used to categorize data into discrete classes. Example: predicting crop type or whether fertilizer is needed (yes/no).