 **Task 24**

**Mean Absolute Error (MAE):**

* **Description:** Measures the average magnitude of errors between predicted and actual values.
* **Formula:** MAE=
* **Use:** Provides a straightforward measure of prediction accuracy.

 **Mean Squared Error (MSE):**

* **Description:** Computes the average of the squares of errors, giving more weight to larger errors.
* **Formula:**
* **Use:** Useful for highlighting significant errors, but can be sensitive to outliers.

 **Root Mean Squared Error (RMSE):**

* **Description:** The square root of MSE, providing error estimates in the same unit as the target variable.
* **Formula:** RMSE=
* **Use:** Helps in interpreting the magnitude of errors in the context of the data's units.

 **R-squared (R²):**

* **Description:** Indicates the proportion of the variance in the dependent variable explained by the model.
* **Formula:** R2=
* **Use:** Provides a measure of goodness-of-fit, but can be misleading with overfitting.

 **Adjusted R-squared:**

* **Description:** Adjusts the R² value for the number of predictors in the model.
* **Formula:** Adjusted R2=
* **Use:** More accurate for comparing models with different numbers of predictors.

 **Mean Absolute Percentage Error (MAPE):**

* **Description:** Measures the accuracy as a percentage by comparing the absolute errors to actual values.
* **Formula:** MAPE=
* **Use:** Useful for understanding model accuracy in relative terms, but can be problematic with zero values in actual data.