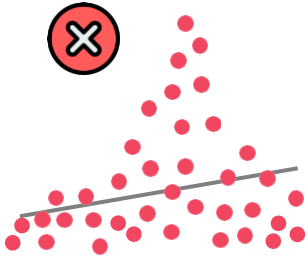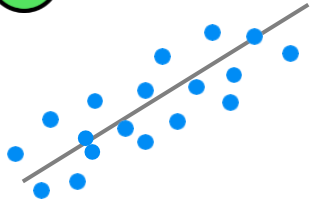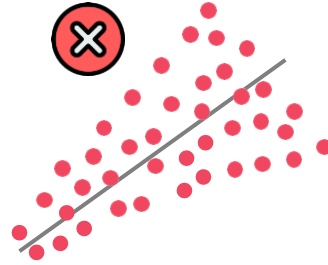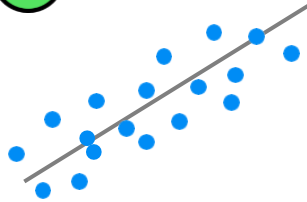# Assumptions of Linear Regression

1. Linearity
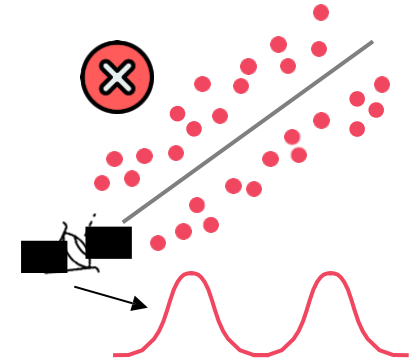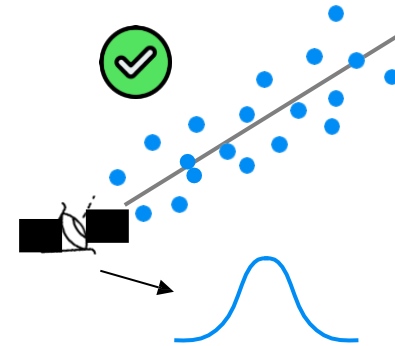(Linear relationship between Y and each X)
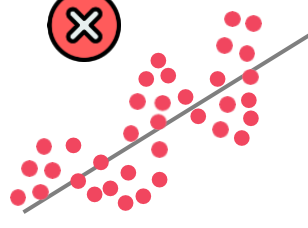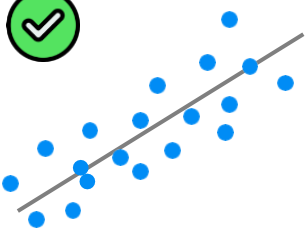
2. Homoscedasticity
(Equal variance)

3. Multivariate Normality
(Normality of error distribution)

4. Independence
(of observations. Includes "no autocorrelation")

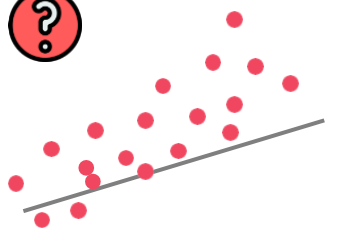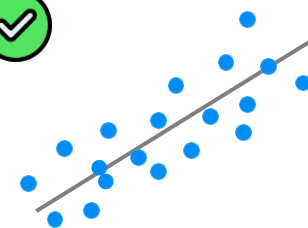## 5. Lack of Multicollinearity
(Predictors are not correlated with each other)

$X_1 \not\sim X_2$ $X_1 \sim X_2$

6. The Outlier Check
(This is not an assumption, but an "extra")