Problem Statements for Anova

Problem Statement 1 (One-Way ANOVA)

A company wants to analyze whether the average productivity (measured in tasks completed per day) of employees differs based on the department they work in (Sales, Marketing, and Development). The goal is to determine if the department has a significant effect on employee productivity.

Problem Statement 2 (One-Way ANOVA)

An educational researcher is investigating whether the type of study method (Self-study, Group Study, Tutoring) affects the test scores of high school students in a mathematics exam. The objective is to find out if there is a statistically significant difference in average test scores across the three study methods.

Problem Statement 3 (Two-Way ANOVA)

A pharmaceutical company is conducting an experiment to study the effect of both drug type (Drug A, Drug B) and dosage level (Low, Medium, High) on blood pressure reduction in patients. The aim is to evaluate whether drug type, dosage, and their interaction significantly affect the blood pressure outcomes.

Problem Statement 4 (Two-Way ANOVA)

An agricultural scientist is analyzing the impact of two factors – type of fertilizer (Fertilizer 1, Fertilizer 2) and irrigation level (Low, High) – on crop yield. The purpose is to assess whether the type of fertilizer, irrigation level, or their combination significantly influences crop yield per hectare.

Problem Statement 5 (One-Way ANOVA)

A restaurant chain wants to assess if customer satisfaction scores differ by the day of the week (Monday, Wednesday, Saturday). The goal is to determine if the day of visit has a statistically significant effect on the average satisfaction rating provided by customers.