Which statement is false
ANOVA is a method of multiplying the variation observed in experimental data into different parts, each part assignable to a known source, cause or factor.

This examines two or more independent samples based on multiple characteristics. In this method, the data must be balanced and factors must be fixed.
2-way ANOVA

This is a method that simultaneously examines the effect of two factors on the dependent variable, along with the effects of interactions between the different levels of these two factors.
2-way ANOVA with replication

This used to test the significance of the difference between means of two or more sets of data simultaneously.
ANOVA

This examines two or more independent samples based on an individual characteristic to determine whether their population means could be equal by comparing their variability between groups and within groups.
one-way ANOVA

In a study, subjects are randomly assigned to one of three groups: control, experimental A, or experimental B. After treatment, the mean scores for the three groups are compared. The appropriate statistical test for comparing these means is:
ANOVA

A new fertilizer has been developed to increase the yield on crops, and the makers of the fertilizer want to better understand which of the three formulations (blends) of this fertilizer are most effective for wheat, corn, soy beans and rice (crops). They test each of the three blends on one sample of each of the four types of crops. What statistical method can be best used in the situation?
Two-way ANOVA without replication

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Two-way ANOVA with replication

Three different sale closing methods were used. Three groups of four salespeople were randomly chosen. Each group was instructed to use only one of the closing methods for all of their sales. Sales totals of each salesperson over the next two weeks were collected. What statistical method can be best used in the situation?
One-way ANOVA

A researcher was interested in whether an individual's interest in politics was influenced by their level of education and gender. Therefore, the dependent variable was "interest in politics", and the two independent variables were "gender" and "level of education". In particular, the researcher wanted to know whether there was an interaction between education level and gender. What statistical method can be best used?
Two-way ANOVA without replication

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