

27-11-2024

Enlist the results in APA format after performing ANOVA on the following data set:

```
[ nmeansd 3050.2610.45 3045.3212.76 3053.6711.47]
mean50.2645.3253.67sd10.4512.7611.47] n 30 30 30
```

Solution:

- Variance of first set = $(10.45)^2 = 109.2$
- Variance of second set = $(12.76)^2 = 162.82$
- Variance of third set = $(11.47)^2 = 131.56$

$$MS_{\text{error}} = \{109.2 + 162.82 + 131.56\} / \{3\} \\ = 134.53$$

$$MS_{\text{between}} = (17.62)(30) = 528.75$$

$$F = MS_{\text{between}} / MS_{\text{error}} \\ = 528.75 / 134.53$$

$$F = 4.86$$

APA writeup: $F(2, 87)=3.93, p \geq 0.01, \eta^2=0.08$.