

PALS0045 Week 3 Quiz

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This Quiz is designed to test your understanding of the learning objectives from the lecture in Week 3.

Complete each question and press submit to check your answers.

Q1:

A 3 x 3 ANOVA contains how many cells?

- ☐ 3 ✗
- ☐ 6 ✗
- ☒ 9 ✓
- ☐ 27 ✗

Correct!

Q2:

What effect is / effects are tested in a 3x2 ANOVA with factors A and B

- ☐ Correlation between A and B ✗
- ☐ Main effect of A and B only ✗
- ☐ Interaction between A and B only ✗
- ☒ Main effects of A and B and interaction between A and B ✓

Correct!

Q3:

If we decide to add another level to factor B what design do we now have?

- ☐ a 3 way ANOVA ✗
- ☒ a 3x3 ANOVA ✓
- ☐ a 4x2 ANOVA ✗
- ☐ a 6 way ANOVA ✗

Correct!

Q4:

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In a 3 x 3 between subjects ANOVA with 8 people in each cell, what is the degrees of freedom for the interaction?

- ☐ 2 ✗
- ☐ 3 ✗
- ☒ 4 ✓
- ☐ 8 ✗

Correct!

each factor has 2 degrees of freedom (number of levels - 1), interaction degrees of freedom = the product of the degrees of freedom for the main effects, so $2 \times 2 = 4$

Q5:

In a 3 x 3 between subjects ANOVA with 8 people in each cell, what is the degrees of freedom for the error?

- ☐ 8 ✗
- ☐ 9 ✗
- ☒ 63 ✓
- ☐ 42 ✗

Correct!

Q6:

In a 4 way ANOVA how many interaction terms are there?

- ☐ 4 ✗
- ☐ 8 ✗
- ☐ 9 ✗
- ☒ 11 ✓

Correct!

2-way interactions: AB, AC, AD, BC, BD, CD; three-way interactions: ABC, BCD, ABD, ACD; and a four-way interaction ABCD

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Q7:

What is the advantage of a between subjects design?

- ☒ Large individual differences do not hide effects ✓
- ☐ Reduces statistical power ✗
- ☐ Reduces practice effects ✗

Correct!

Q8:

In a within subjects ANOVA with one factor A, how do we calculate the Mean Square effect?

- ☐ Divide sum of squares for the effect for A by the sum of squares for the main effect of subject ✗
- ☒ Divide the SS for the effect of A by the SS for the interaction between A and subject ✓
- ☐ Divide the SS for the main effect of subject by the SS for the main effect of A ✗

Correct!

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