

Stats Review - ANSWERS

Part I. Matching

A.	α	M.	mortality
B.	adaptation	N.	N
C.	χ^2 (chi square)	O.	p
D.	construct	P.	percent agreement
E.	Δ	Q.	r
F.	dependent t	R.	random assignment
G.	discriminant	S.	reaction time
H.	equilibration	T.	s
I.	F	U.	Σ
J.	face	V.	stratified
K.	g	W.	t
L.	λ	X.	Ω

W	1.	The appropriate test statistic to use when comparing the means (not percentages) of two groups
C	2.	The appropriate test statistic to use when comparing percentages
I	3.	The appropriate test statistic to use when comparing the means of two or more groups, or when analyzing a factorial design
Q	4.	The appropriate test statistic to use when measuring the linear relationship between two variables
F	5.	The appropriate test statistic to use when comparing two scores collected from the same group of people (e.g., “before” and “after”)
A	6.	A measure of the internal consistency of a questionnaire
O	7.	The letter used to represent statistical significance
P	8.	A measure of inter-rater reliability
M	9.	The dropout rate in an experiment
V	10.	A way to make a sample more representative without obtaining a truly random sample

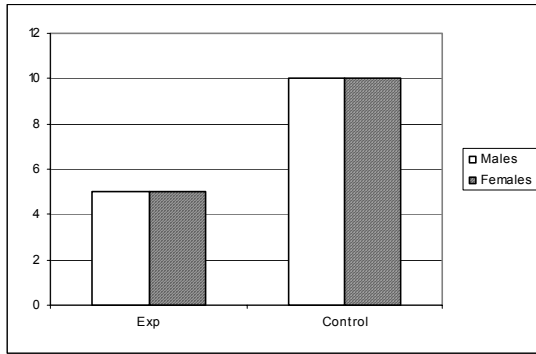
A.	between-subjects	M.	maturation effects
B.	convergent	N.	mixed
C.	curvilinear	O.	power
D.	demand characteristics	P.	practice effects
E.	discriminant	Q.	random assignment
F.	double-barreled	R.	random sampling
G.	double-blind	S.	selection effects
H.	history effects	T.	significance
I.	instrument decay	U.	simple main effect
J.	interaction	V.	statistical regression toward the mean
K.	leading	W.	testing effects
L.	main effect	X.	within-subjects

M	11.	Threat to internal validity in a within-subjects design because of naturally occurring processes within participants (e.g., immune system)
T	12.	Probability of obtaining a test statistic as extreme or more extreme than yours just by chance
D	13.	Features of a study that can reveal the hypothesis to participants
S	14.	Threat to internal validity caused by pre-existing differences among levels of the independent variable
X	15.	Design in which the same participants are exposed to more than one level of the independent variable
O	16.	The probability of obtaining statistical significance, given a known sample size and effect size
E	17.	Type of validity showing that a measure is distinct from related measures
Q	18.	Technique designed to reduce the risk of selection effects
G	19.	Technique designed to reduce the risk of experimenter expectancy effects
J	20.	Occurs when the effect of one independent variable is different at different levels of another independent variable
F	21.	Example of this is “Was your waiter friendly and fast?”
H	22.	Threat to internal validity in a within-subjects design because of an external event occurring between measures
C	23.	Type of relation between variables that is not captured by correlation
R	24.	Technique designed to increase external validity
N	25.	Design that contains both within-subjects and between-subjects independent variables
V	26.	Threat to internal validity occurring in a within-subjects design when a sample is selected because of its extreme scores (either high or low).

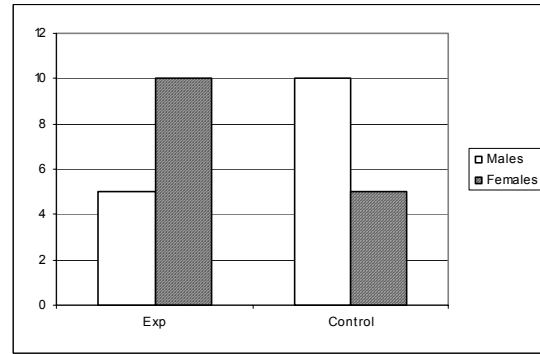
Part II. Multiple choice

In an experiment on the effect of a new drug, males and females are randomly assigned to experimental or control groups and then measured. Use the following four figures to answer questions #1–3 below.

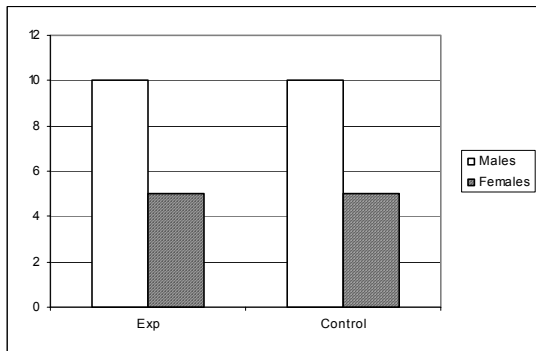
A



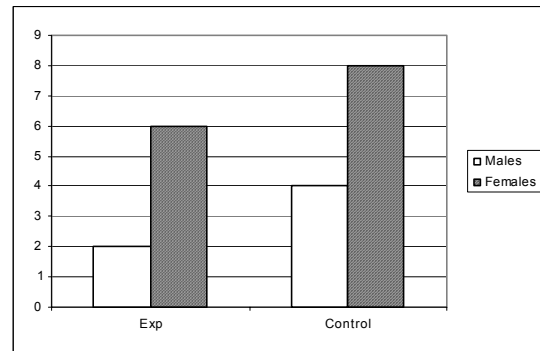
B



C



D



1. Which of the four figures shows an interaction? B
2. Which of the four figures shows a main effect for drug and no main effect for gender? A
3. Which of the four figures shows a main effect for gender and no main effect for drug? C
4. Which of the four figures shows a main effect for drug and a main effect for gender D but no interaction?