Exam 1 Review 5pm

Note Title 9/22/2010

Notes Sheet: include anything.

1. Types Vars. Q
   W's: variable, case, why
2. Categorical.

	Graph	Summarize
One Var	Bar Chart	Frequency = counts Rel. Freq = %
Two Var	Side-by-Side Bar Charts → Use % w/in category	Contingency Table

	D	R
M		
F		

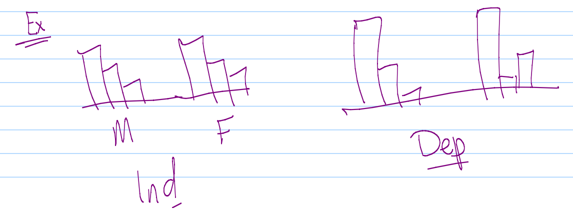
← ANS Q's involving %. (CW)

Using side-by-side bar charts, we can answer questions about independence.

2 variables are ind if side-by-side bar charts are identical.

ie: If dist. of one variable (ex: pol. or.) is same for all categories of the other variable (ex: each gender)

Ex



C4: Quantitative Data.

	Graph	Summarize
One var	Hist. Boxplot ← know parts Discuss: Shape H - modes H/B - gaps/outliers Both - skew/sym/uniform	Spread: IQR; center: Med good for skew/outliers (Resistant measures) Mean, SD good for sym data

Q_1 = value separates lower 25%

C5

	Graph	Summarize
One Quant, One Cat	Side-by-Side Hist/Box * Compare shape	* Compare center, spread.

C6

$z = \frac{y - \bar{y}}{s}$ = # of SDs above/below the mean

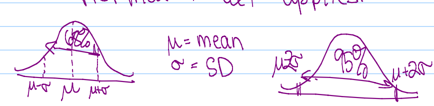
* allows comparison

AKA: standardized scores

	shape	center	spd
Shift (add/subt. to every value)	No	+/-	No
Rescale (mult/div " ")	No	*/÷	*/÷

Mean z = 0 SD(z) = 1

Normal Model: * Data is roughly symmetric, unimodal normal model applies.

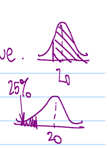


Draw: ① mark center label w/ mean ② Shade region of interest

Ex: Data is normal, mean 20, SD 3.

a) What % is above 19? ← Given x value.

b) What is Q_1? ← Given %.



C 7-8,9

	Graph	Summarize
2 Quan Var	Scatter Plot ① Form: Lin, Non, No pattern? pos/neg ② Strength weak, strong ③ Non Constant Var, Outliers	r = correlation coeff. → strength Find regression line

Interpret: * slope * y-int * R^2

Diagnostic: Residual Plot
* linearity
Look for: no pattern

Diagnostic: R^2 comment on strength >50%

More: ① prediction ② Residual = Observed − expected

Essays: ① stick to what you know ② Always talk about minitab output. → use sentences.