AP Statistics   Name_____

Unit 02 REDO – Day 01 Notes   Period_____

Scatterplots: <u>Include:</u>

Describe using:

Form:

Direction:

Strength:

Correlation:

Correlation Coefficient (r):

Coefficient of Determination (R^2):

LSRL:

Three ways to find the LSRL equation:

METHOD #1: Using a list of data points:	METHOD #2: Using calculated values for mean, standard deviation, and r.	METHOD #3: Using a MiniTab Output:
1. Put data in L1 and L2 of your calculator 2. STAT > CALC > 8. LinReg(a+bx) 3. Place a and b values into your equation and be sure to write your equation with Y-HAT and IN CONTEXT.	1. Use the equations on the equation sheet to calculate a and b. 2. Place a and b values into your equation and be sure to write your equation with Y-HAT and IN CONTEXT.	1. Identify a and b. The value of a can be found in the Constant row, Coef column. The value of b can be found in the Variable row, Coef column. 2. Place a and b values into your equation and be sure to write your equation with Y-HAT and IN CONTEXT.

METHOD #1 EXAMPLE: Create the LSRL for predicting number of bags of dog food used per month based on the number of dogs a person owns. Use the data table below.

# of dogs	Bags of dog food used/month
1	3
2	6
3	8
2	7
3	10
4	11
5	15
5	15
4	12
3	9
6	17
9	25
8	24
7	20

METHOD #2 EXAMPLE: Create the LSRL for predicting number of bags of dog food used per month based on the number of dogs a person owns. Use the values below.

$\bar{x} =$

$s_x =$

$\bar{y} =$

$s_y =$

$r =$

METHOD #3 EXAMPLE: Create the LSRL for predicting number of bags of dog food used per month based on the number of dogs a person owns. Use the MiniTab Output below.

Predictor	Coef	SE Coef	T	P
Constant	0.6362	whatevs	whatevs	whatevs
Bags	2.7918	whatevs	whatevs	whatevs
S = whatevs	R-Sq = 0.9902		R-Sq(adj) = whatevs	

Other important things:

Calculating & Interpreting Residuals:

residual = observed value – predicted value

EXAMPLE: Calculate and interpret the residual value for a person who owns 7 dogs.

Residual Plot:

Influential Point:

Extrapolation:

EXAMPLE: Would it make sense to use our model to predict the number of bags of dog food needed for a person who has 49 dogs? Why or why not?

Interpreting slope and y-intercept:

EXAMPLE:

Slope:

y-intercept: