

Unit 18: Statistics Review

Two Way Frequency Tables

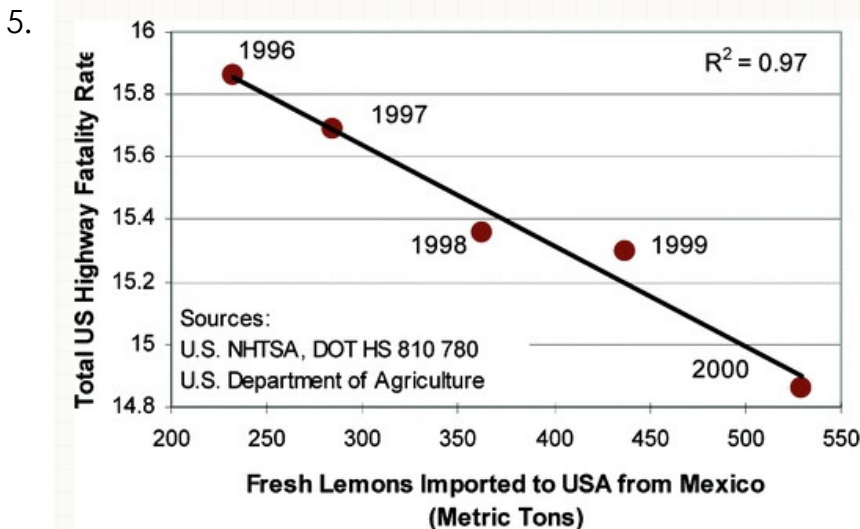
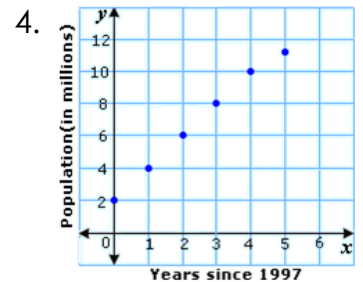
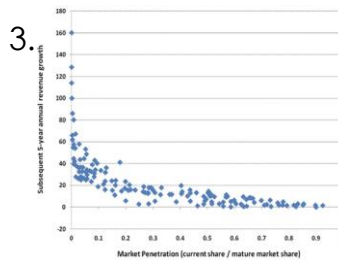
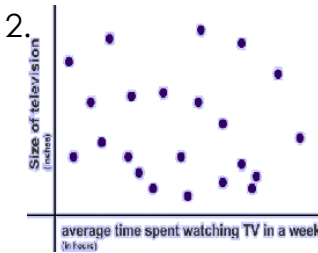
1. Mr. Smith keeps track of his students' homework completion. He keeps track of how many boys and girls do not complete their homework. He puts students who don't complete their homework into two categories: first-time offenders and repeat offenders. He uses a table to keep track of the results.

	First-Time Offenders	Repeat Offenders	Total
Boys			
Girls			
Total			

- In one month 36 girls and 12 boys did not do their homework for the first time. 12 girls and 30 boys did not do their homework again. Put these figures in your table.
- How many students did not complete all of their homework assignments this month?
- What percentage of the students who did not complete their homework were boys who were First-Time Offenders?
- Are boys or girls more likely to not complete their homework? Explain your reasoning.

Correlation & Causation of Scatter Plots

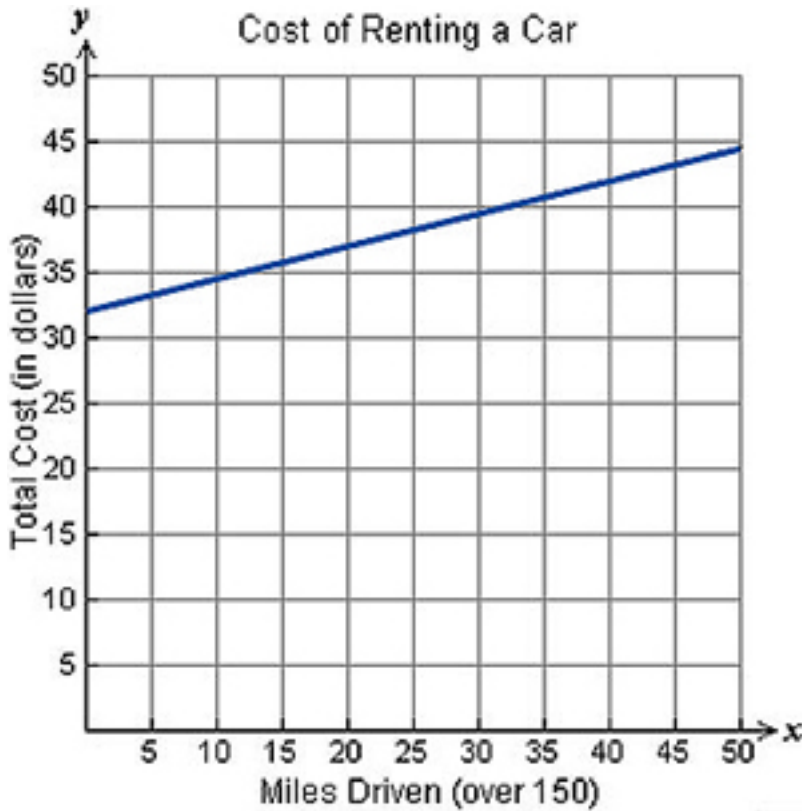
Identify the following scatter plots as a linear positive, linear negative, exponential growth, exponential decay, or no correlation.



- Correlation? Yes or No
- Positive, Negative or N/A
- Causation? Yes or No

Interpreting Linear Equations

6. The following graph describes the cost of renting a car. After studying the graph, answer the following questions.



a) What is the y-intercept?

b) What is the slope?

c) What does the y-intercept mean in context?

d) What does the slope mean in context?

e) Write the linear equation.

Calculator – Lines of Best Fit & Correlation Coefficient

7. Find the **linear** line of best fit for the following table:

Total Fat (x)	0	9	13	21	30	36	42
Total Calories (y)	0	260	320	425	452	463	550

Equation: _____

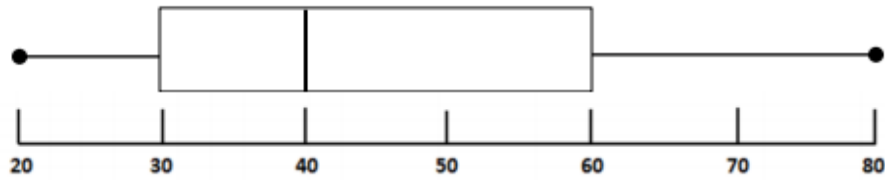
8. Find the **exponential** line of best fit for the following table:

x	-3	-2	-1	0	1	2	3
y	$\frac{1}{9}$	$\frac{1}{3}$	1	3	9	27	81

Equation: _____

9. What does a correlation coefficient of -1 mean (a positive or negative correlation)? Is it a strong or weak relationship?

10. Fine Chocolates of the Palm Beaches used a box plot to show their daily sales for the month of December as shown below.



From the list below, fill in the following. The numbers may be used more than once or not at all.

20 30 40 50 60 70 80

Median Minimum Range IQR Q1

What percentage of the data has at least a daily sale of 60?

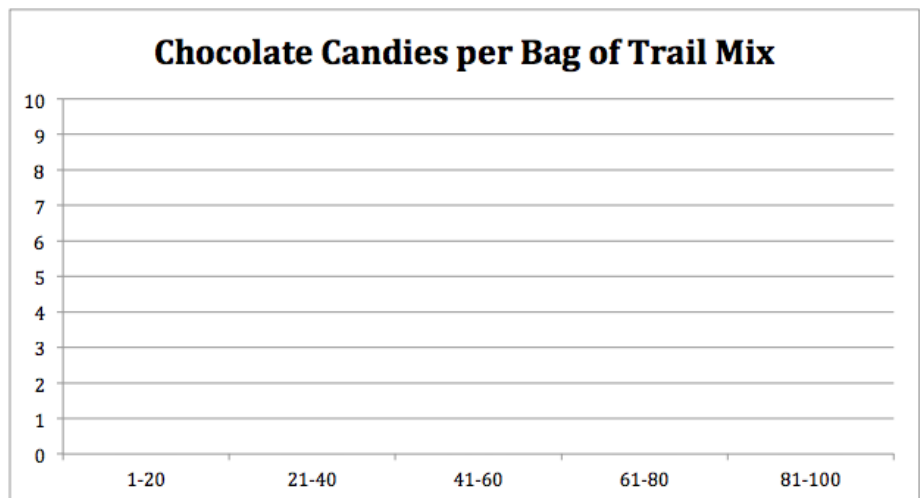
What percentage of the data has at least a daily sale of 30?

11. Use the following data of chocolate candies per bag of trail mix, to construct a histogram.

50, 42, 119, 45, 68, 32, 67, 111, 61, 31, 75, 39, 62, 64, 49, 55, 51, 33, 117, 96, 64, 82

Frequency Table

Interval	# of Values
1-20	
21-40	
41-60	
61-80	
81-100	



12. Find the mean, median, mode, and range of the following data: 14, 19, 20, 8, 32, 25