

Statistics Final Review

Average Lifespan

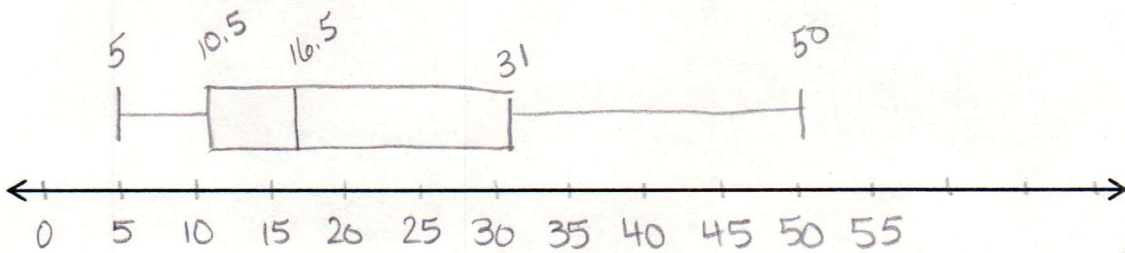
Statistical Models

- Box & Whisker
- Histogram
- 2-way Frequency Tables
- Scatterplot

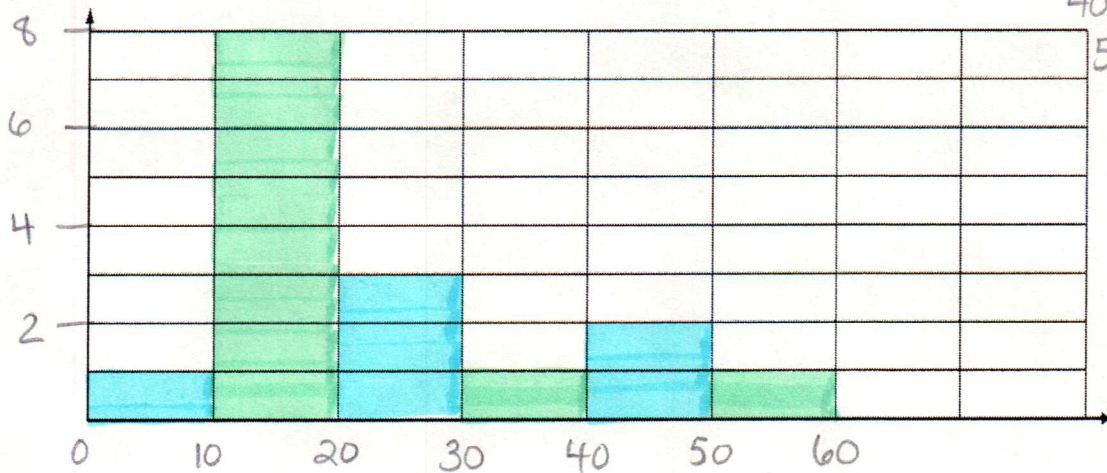
Animal	Years	Animal	Years
Lion	35	Chinchilla	20
Cottontail	10	Bee (Queen)	5
Teal	20	Congo Eel	27
Macaw	50	Pheasant	18
Painted Turtle	11	Prarie Dog	10
Asian elephant	40	Nutria	15
Grouse	10	Flying Squirrel	14
Rhinoceros	40	Pionus Parrot	15

1. Use the data in the chart above.

a. Make a box and whisker plot of the data.



b. Make a histogram of the data.



0-9	1
10-19	8
20-29	3
30-39	1
40-49	2
50-59	1

c. Describe the data using vocabulary.

Unimodal
 Skewed right
 Ranges from 0-60

2. A group of boys and girls were asked whether their favorite small pet would be a rat, a leopard gecko, or a chinchilla? In the girls 26 chose rats and 13 chose chinchillas. For the boys 18 chose the leopard gecko and 2 chose the chinchilla. There were 35 boys in the survey and a total of 22 students chose the leopard gecko.

Organize the information in the 2-way frequency table below.

	Boys	Girls	Total
Rats	15	26	41
Leopard Gecko	18	4	22
Chinchilla	2	13	15
Total	35	43	78

Fill in the relative frequency table.

	Boys	Girls	Total
Rats	19.2%	33.3%	52.6%
Leopard Gecko	23.1%	5.1%	28.2%
Chinchilla	2.6%	16.7%	19.2%
Total	44.9%	55.1%	100%

Shade the marginal frequencies.

Give three observations from the data.

- anything you notice about the data
-
-

If we calculate the row data, what are we comparing?

individual pet info

If we calculate the column data, what are we comparing?

boys/girls preferences

You decide to surprise your brother with a pet. Which do you choose and why? (Answer must be data based.)

Answers will vary - must include data

3. A convenience store manager notices that sales of soft drinks are higher on hotter days, so he assembles the data in the table.

a. Find the average point.

$(69.25, 515)$

High Temperature (°F)	Number of cans sold
55	340
58	335
64	410
68	460
70	450
75	610
80	735
84	780

b. Make a scatter plot of the data. Include the average point in a different color or as an x on the graph.

c. Look at the correlation of the data.

$554 \div 8 = 69.25$ $4120 \div 8 = 515$

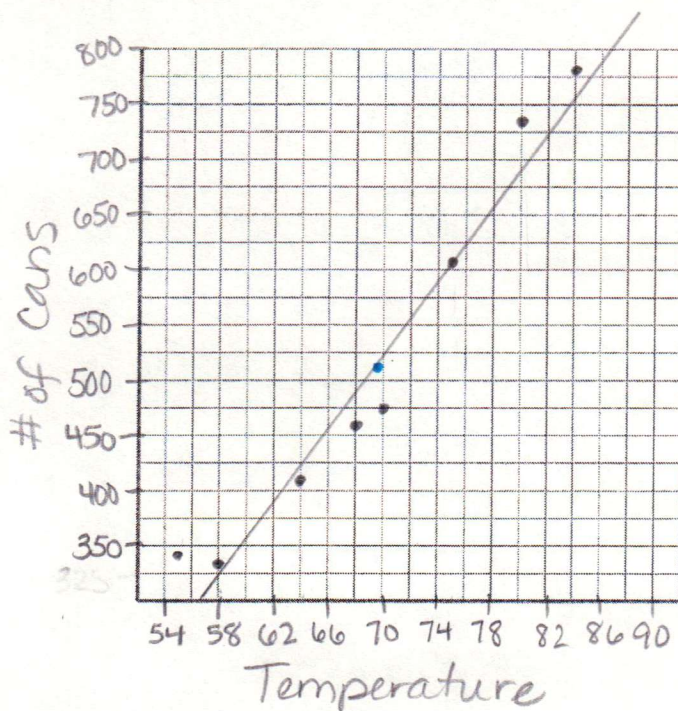
Direction: positive

Strength: strong

d. Draw a linear regression line through the average point.

e. Write an equation of the line you drew.

$y = 16.42x - 621.83$

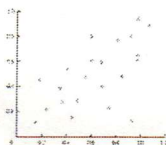


f. How many cans would you expect the store to sell on a 92° day?

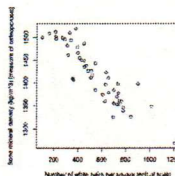
$y = 16.42(92) - 621.83 = 888.81$

≈ 889 cans

g.



Direction: positive
Strength: moderate



Direction: negative
Strength: strong