

Additional Practice

Investigation 4

Samples and Populations

Use the tables below, which display the results of a study of 47 half-ounce boxes of two brands of raisins.

Vine Hill Raisins

Number in Box	Mass (grams)	Number in Box	Mass (grams)
29	14.78	38	16.3
35	16.59	38	16.85
35	16.01	38	17.33
35	16.55	38	17.57
36	16.99	40	16.2
38	16.34	40	16.78
38	16.3	40	17.35
39	17.83	41	17.43
39	16.66	41	16.64
39	18.36	41	16.62
39	16.93	31	14.7
40	16.25	34	16.04
40	17.92	35	16.81
40	17.12	36	16.86
40	17.37	36	16.75
42	16.95	36	17.18
42	17.45	36	15.77
44	18.48	36	16.28
35	15.64	37	16.25
36	16.88	37	17.42
36	16.36	37	16.25
36	16.3	37	15.63
37	17.25	37	17.74
37	15.61		

Suntime Raisins

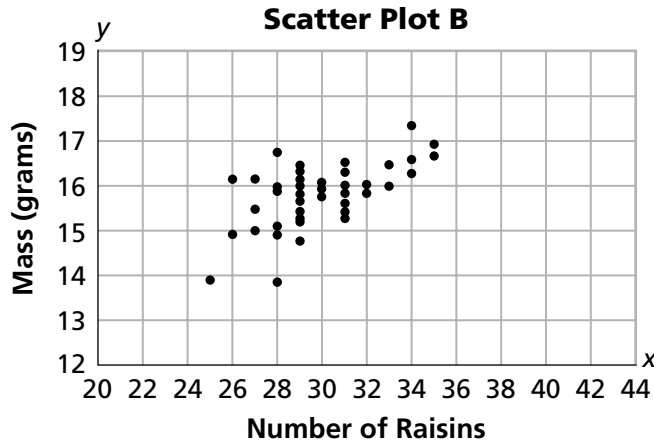
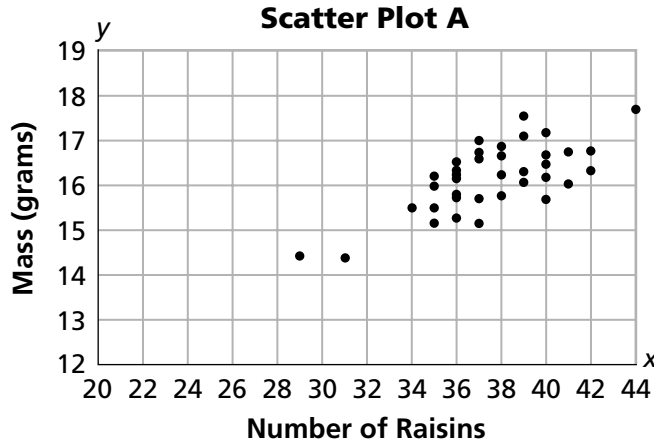
Number in Box	Mass (grams)	Number in Box	Mass (grams)
25	14.15	31	16.13
26	16.74	31	16.6
27	15.42	32	16.6
27	16.74	33	16.55
27	15.98	33	17.11
28	17.43	34	16.88
28	16.44	34	18.1
28	16.55	35	17.63
28	15.55	35	17.32
28	15.33	26	15.34
29	16.75	28	14.11
29	16.19	29	16.94
29	16.36	29	15.16
29	17.1	29	15.75
29	16.58	29	15.65
30	16.36	30	16.5
30	16.29	31	15.83
31	15.9	31	17.17
29	16.18	32	16.6
29	15.91	32	16.59
30	16.66	32	16.38
31	15.73	33	17.11
31	16.38	34	17.24
31	16.92		

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1. The two scatter plots below show the data from the tables. Which scatter plot shows the data for Suntime raisins? Which shows the data for Vine Hill raisins? Explain your reasoning.



2. Is this statement true or false: “Vine Hill raisins typically have more raisins in a box than do Suntime raisins.” Explain your reasoning using the two graphs.
3. Is there a relationship between the number of raisins in a box and the mass in grams? Explain.

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Samples and Populations

For Exercises 4–6, use the data below.

Chicken Sandwiches From Restaurant Chains

Size (oz)	Calories	Fat (g)	Carbohydrates (g)
8	360	7	44
10	370	8	53
8	380	4	57
9	400	5	57
8	400	16	37
8	470	20	51
8	470	20	46
10	500	24	52
8	510	19	57
10	540	30	42
9	550	23	55
10	550	30	46
10	570	25	48
12	580	19	58
11	640	29	61
13	660	29	56
12	720	30	65
13	740	30	78
12	910	40	86
15	950	56	76

4. a. Make a scatterplot for size vs. calories.

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- b. Describe any relationship you see between the size of the sandwich and calories. Explain your reasoning.
5. a. Make a scatterplot for size of sandwich vs. fat.
- b. What is the relationship between sandwich size and fat content? Explain.
6. a. Make a scatterplot for size vs. carbohydrates.
- b. What is the relationship between size of a sandwich and the carbohydrates? Explain.

Additional Practice *(continued)*

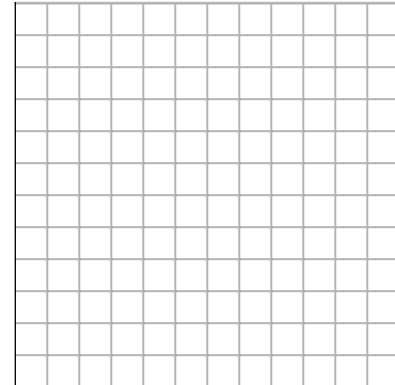
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7. a. Make a scatterplot of the data below for price vs. weight.

Bike Comparisons

Type of Bike	Price	Weight (lb)
Front Suspension Mountain Bike	\$450	29.5
Front Suspension Mountain Bike	\$440	29.5
Front Suspension Mountain Bike	\$440	30.5
Front Suspension Mountain Bike	\$450	31.5
Front Suspension Mountain Bike	\$440	31.0
Front Suspension Mountain Bike	\$500	30.5
Front Suspension Mountain Bike	\$500	31.5
Front Suspension Mountain Bike	\$400	32.0
Comfort Bike	\$300	33.0
Comfort Bike	\$300	32.5
Comfort Bike	\$300	35.5
Comfort Bike	\$300	32.0
Comfort Bike	\$280	31.5
Comfort Bike	\$290	33.0
Comfort Bike	\$285	33.5



b. Is there a strong or weak relationship between the weight of a bike and the price for the bike? Explain your reasoning.

c. If you pay more, are likely to get a heavier or lighter bike?