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Chapter 2: Displaying and Describing Categorical Data – Quiz A
***Name*_____**

A large national retailer of electronics conducted a survey to determine consumer preferences for various brands of point and shoot digital cameras. The table summarizes responses by brand and gender.

	Female	**Male**	**Total**
Cannon Power Shot	73	59	**132**
Nikon Cool Pix	49	47	**96**
Sony Cyber Shot	58	33	**91**
Panasonic Lumix	35	30	**65**
Fujifilm Finepix	45	28	**73**
Olympus S/V	37	41	**78**
Other Brands	86	67	**153**
Total	**383**	**305**	**688**

2.1.3 Create and use frequency and relative frequency distributions and their displays.
1. Identify the variables and tell whether each is categorical or quantitative.

2.1.3 Create and use frequency and relative frequency distributions and their displays.
2. Find each of the following percentages.

a. What percent of the responses were males who prefer Nikon?
b. What percent of the male responses prefer Olympus?
c. What percent of the consumers who choose Nikon were females?

2.3.4 Determine if displays of data are appropriate.
3. What is the marginal distribution of brands?

2.2.4 Determine if displays of data are appropriate.
4. Prepare an appropriate chart to display the marginal distribution of brands.

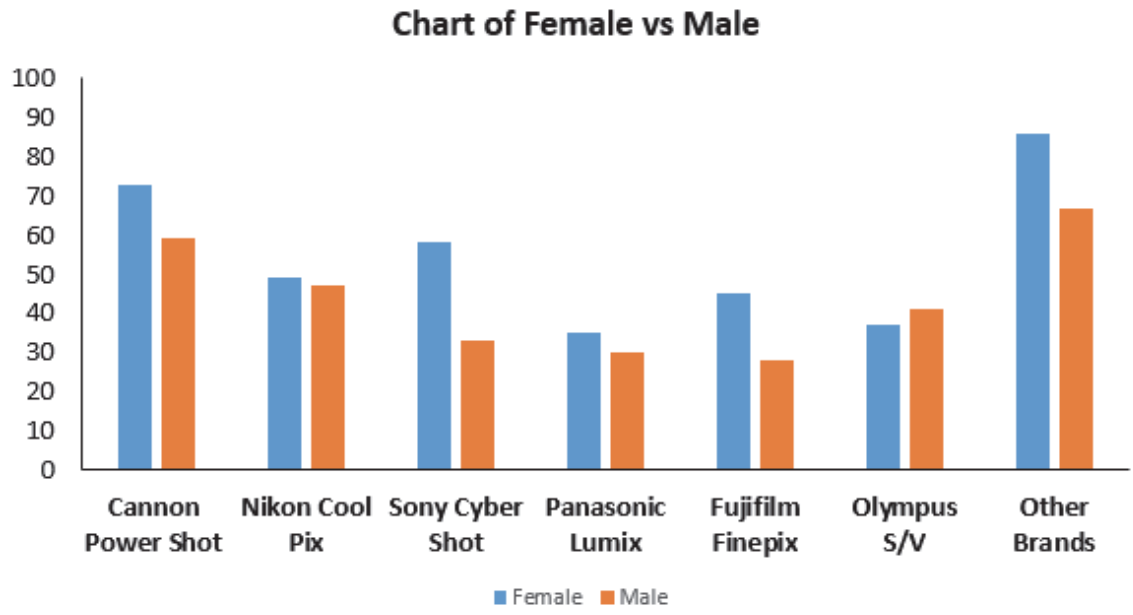
2.3.4 Determine if displays of data are appropriate.
5. Write a sentence or two about the conditional relative frequency distribution of the brands among female respondents.

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2.2.1 Determine if displays of data are appropriate.

6. Consider the following side by side bar chart for the data above:



Does the chart indicate that brand preference is independent of gender? Explain.

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Chapter 2: Displaying and Describing Categorical Data – Quiz A – Key

A large national retailer of electronics conducted a survey to determine consumer preferences for various brands of digital cameras. The table summarizes responses by brand and gender.

	Female	**Male**	**Total**
Cannon Power Shot	73	59	**132**
Nikon Cool Pix	49	47	**96**
Sony Cyber Shot	58	33	**91**
Panasonic Lumix	35	30	**65**
Fujifilm Finepix	45	28	**73**
Olympus S/V	37	41	**78**
Other Brands	86	67	**153**
Total	**383**	**305**	**688**

1. Identify the variables and tell whether each is categorical or quantitative.

Gender and Brand; both categorical.

2. Find each of the following percentages.

a. What percent of the responses were males who prefer Nikon?

6.8% (47/688)

b. What percent of the male responses prefer Olympus?

13.4% (41/305)

c. What percent of the consumers who choose Nikon were females?

51.0% (49/96)

3. What is the marginal distribution of brands?

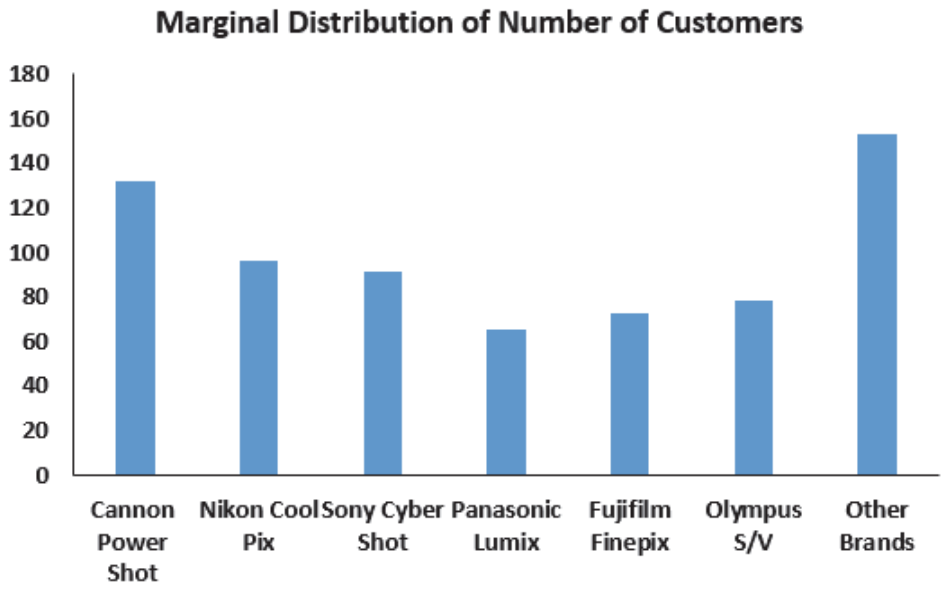
132 for Cannon Power Shot, 96 for Nikon Cool Pix, 91 for Sony Cyber Shot, 65 for Panasonic Lumix, 73 for Fujifilm Finepix, 78 for Olympus S/V and 153 for other brands.

4. Prepare an appropriate chart to display the marginal distribution of brands.

Either a bar chart (shown below) or a pie chart is appropriate.

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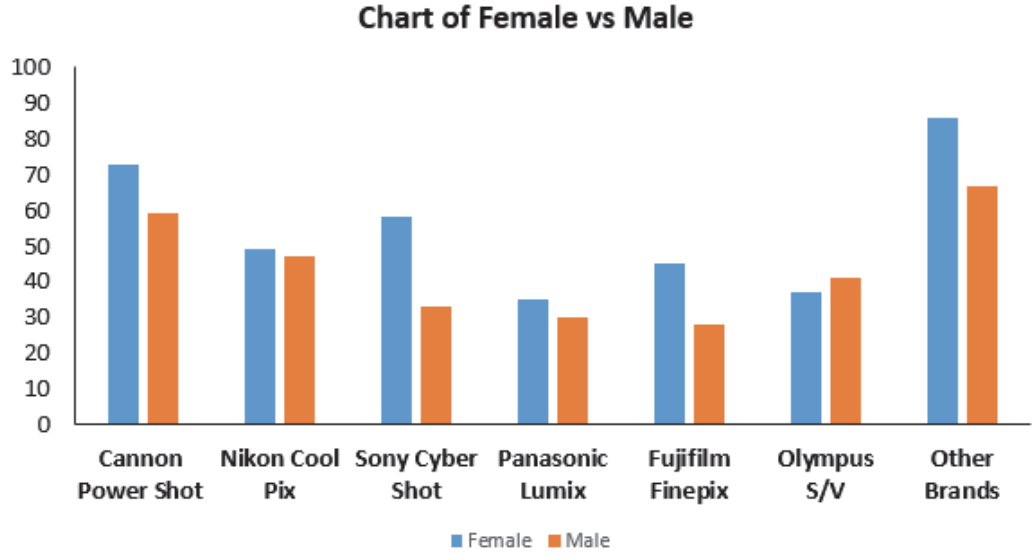
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5. Write a sentence or two about the conditional relative frequency distribution of the brands among female respondents.

Among females, 19.1% prefer Cannon, 12.8% prefer Nikon, 15.1% prefer Sony, 9.1% prefer Panasonic, 11.7% prefer Fujifilm, and 9.7% prefer Olympus. The remaining 22.5% of females preferred other brands.

6. Consider the following side by side bar chart for the data above:



Does the chart indicate that brand preference is independent of gender? Explain.

Brand preference appears to be independent of gender for about half of the brands. The other half of the brand preferences seem to have preference based on gender. These data provide little evidence of a difference in digital camera choice based on gender.

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Chapter 2: Displaying and Describing Categorical Data – Quiz B
***Name*_____**

A full service brokerage firm gathered information on how their clients were investing for retirement. Based on age, clients were categorized according to where the largest percentage of their retirement portfolio was invested. The table below summarized the data.

	Age 50 or Younger	**Over Age 50**	**Total**
Mutual Funds	30	34	**64**
Stocks	37	45	**82**
Bonds	19	23	**42**
Total	**86**	**102**	**188**

2.1.3 Create and use frequency and relative frequency distributions and their displays.
1. Identify the variables and tell whether each is categorical or quantitative.

2.1.3 Create and use frequency and relative frequency distributions and their displays.
2. Find each of the following percentages.

a. What percent of the clients are over age 50 who invests in mutual funds?
b. What percent of clients over age 50 invest in mutual funds?
c. What percent of the mutual fund investors are over age 50?

2.3.4 Determine if displays of data are appropriate.
3. What is the marginal distribution of age?

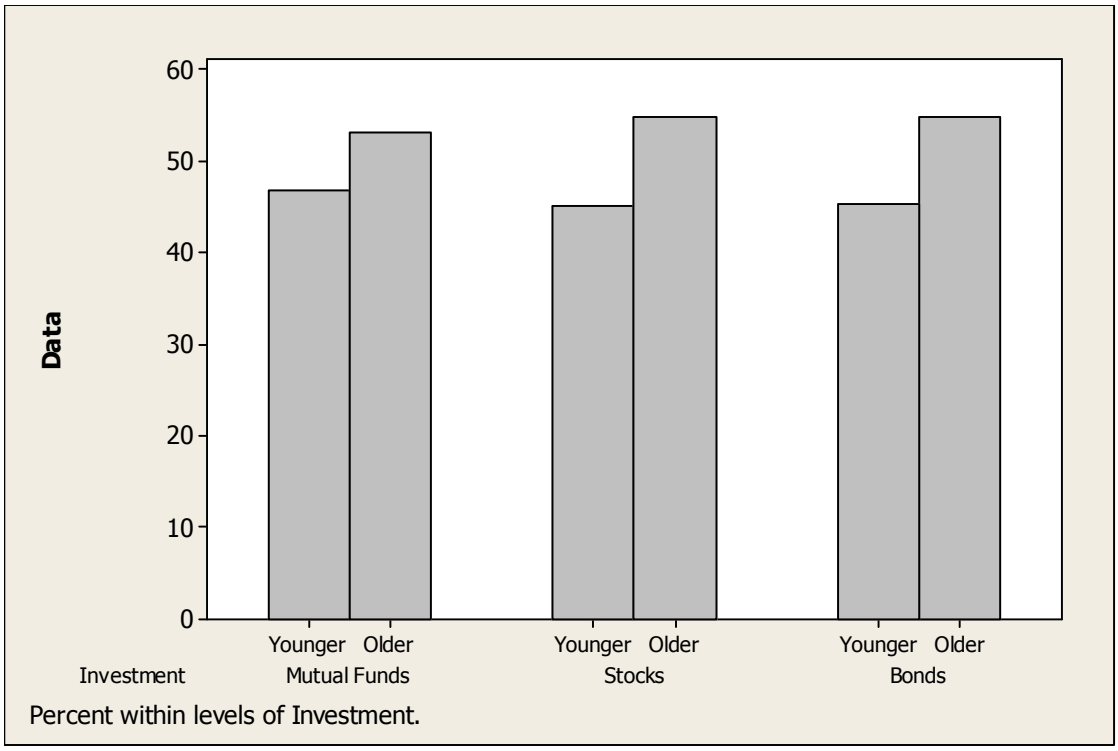
2.2.4 Determine if displays of data are appropriate.
4. Prepare an appropriate chart to display the marginal distribution of age.

2.1.3 Create and use frequency and relative frequency distributions and their displays.
5. Write a sentence or two about the conditional relative frequency distribution of mode of investment for clients age 50 or younger.

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2.4.3 Create and use frequency and relative frequency distributions and their displays.



6. Consider the following side by side bar chart for the data above:
Does the chart indicate that mode of investment is independent of age? Explain.

2.5.4 Create and use frequency and relative frequency distributions and their displays.

7. A newspaper examined the town's two hospitals and found that over the last six months at Mercy Hospital 79% of the patients survived while at County Hospital 90% survived. The table below summarizes the findings.

	Lived	Died	Total	% who lived
Mercy Hospital	790	210	1000	79.0%
City Hospital	900	100	1000	90.0%

On closer investigation, it was observed that there was a difference in survival between patients who were admitted in poor condition or worse compared with patients admitted in fair condition or better. The following tables were created:

Patients admitted in poor condition or worse:

	Lived	Died	Total	% who lived
Mercy Hospital	210	200	410	
City Hospital	40	70	110	

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Patients admitted in fair condition or better:

	Lived	Died	Total	% who lived
Mercy Hospital	580	10	590	
City Hospital	860	30	890	

a) Fill in the four blanks in the two tables above with percentages.
b) Compare the percentages in the first table with those in the next two tables. Do you observe anything unusual?
c) Which hospital would you choose and why?

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Chapter 2: Displaying and Describing Categorical Data – Quiz B – Key

A full service brokerage firm gathered information on how their clients were investing for retirement. Based on age, clients were categorized according to where the largest percentage of their retirement portfolio was invested. The table below summarized the data.

	Age 50 or Younger	**Over Age 50**	**Total**
Mutual Funds	30	34	**64**
Stocks	37	45	**82**
Bonds	19	23	**42**
Total	**86**	**102**	**188**

1. Identify the variables and tell whether each is categorical or quantitative.

Mode of investment and age; mode of investment is categorical; age is a quantitative variable. However, in this case investors are grouped according to age therefore the "age category" is relevant and this is categorical.

2. Find each of the following percentages.

a. What percent of the clients are over age 50 who invests in mutual funds?

18.1% (34/188)

b. What percent of clients over age 50 invest in mutual funds?

33.3% (34/102)

c. What percent of the mutual fund investors are over age 50?

53.1% (34/64)

3. What is the marginal distribution of age?

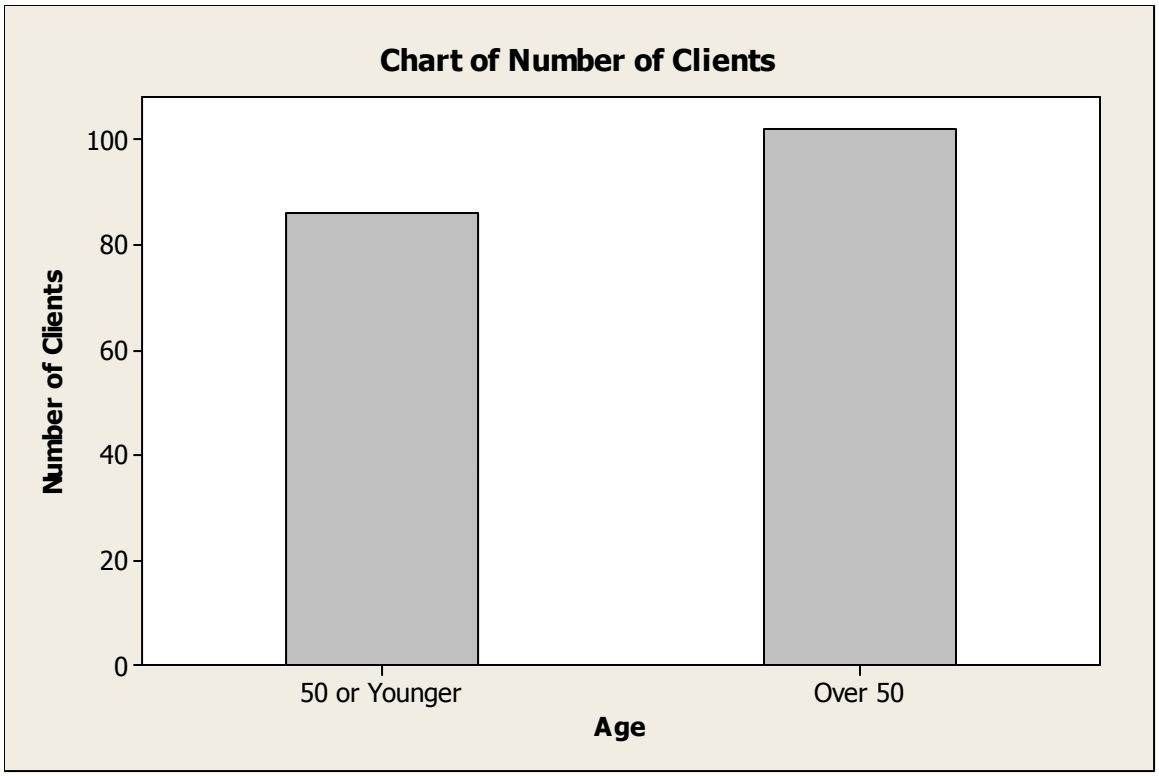
86 clients are age 50 or younger and 102 are over age 50.

4. Prepare an appropriate chart to display the marginal distribution of age.

Either a bar chart (shown below) or a pie chart is appropriate.

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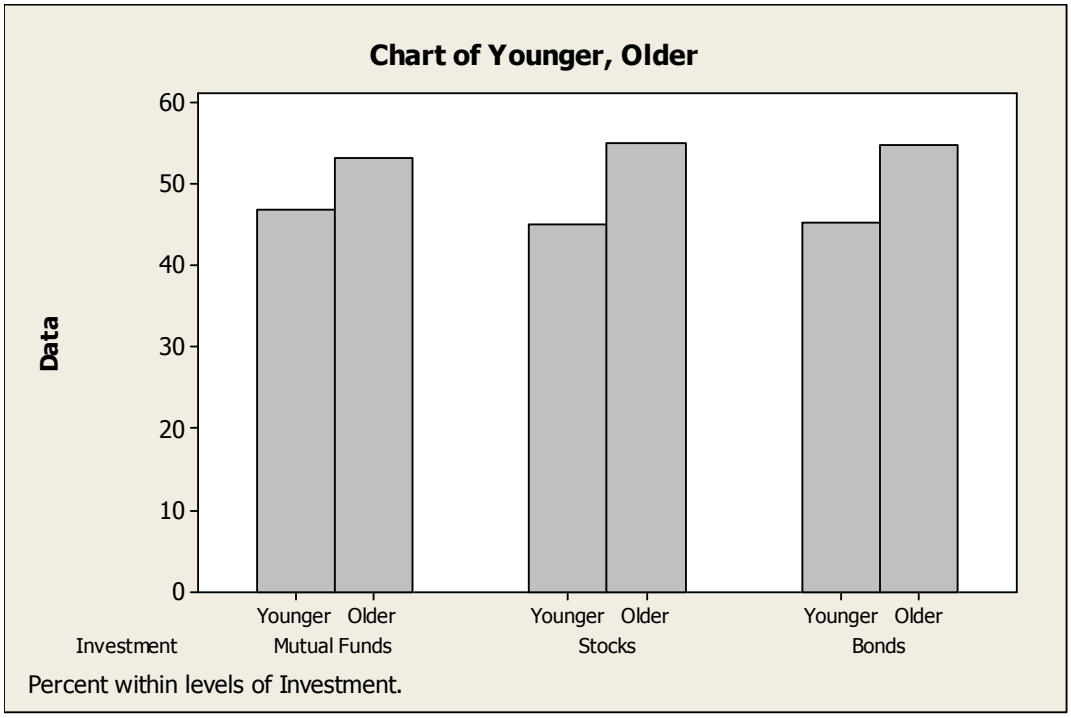
5. Write a sentence or two about the conditional relative frequency distribution of mode of investment for clients age 50 or younger.

More clients (43%) age 50 or younger invested their retirement savings primarily in stocks rather than in any other mode of investment, 35% invested in mutual funds while only 22% invested in bonds.

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6. Consider the following side by side bar chart for the data above:



Does the chart indicate that mode of investment is independent of age? Explain.

The way clients invest for retirement does seem to be independent of age. These data provide little indication of a difference in mode of investing for retirement based on clients' ages at this firm.

7. A newspaper examined the town's two hospitals and found that over the last six months at Mercy Hospital 79% of the patients survived while at County Hospital 90% survived. The table below summarizes the findings.

	Lived	Died	Total	% who lived
Mercy Hospital	790	210	1000	79.0%
City Hospital	900	100	1000	90.0%

On closer investigation, it was observed that there was a difference in survival between patients who were admitted in poor condition or worse compared with patients admitted in fair condition or better. The following tables were created:

Patients admitted in poor condition or worse:

	Lived	Died	Total	% who lived
Mercy Hospital	210	200	410	51.2%
City Hospital	40	70	110	36.4%

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Patients admitted in fair condition or better:

	Lived	Died	Total	% who lived
Mercy Hospital	580	10	590	98.3%
City Hospital	860	30	890	96.6%

a) Fill in the four blanks in the two tables above with percentages.
b) Compare the percentages in the first table with those in the next two tables. Do you observe anything unusual?

Those who were admitted in fair condition or better have a very high rate of survival. Mercy Hospital has an over 50% of survival for those admitted in poor condition or worse whereas in the summary table, Mercy Hospital had a lower rate of survival.

c) Which hospital would you choose and why?

It would be best to choose Mercy Hospital because it has the higher rate of survival for both conditions of admitted patients.

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Chapter 2: Displaying and Describing Categorical Data– Quiz C – Multiple Choice
***Name*_____**

2.1.3 Create and use frequency and relative frequency distributions and their displays.

1. A automobile marketing firm conducts a study to see what types of cars people owned before buying an American car. The results are shown below.

Previous Ownership	Frequency
American	760
Japanese	375
Korean	72
German	37
Other	24
Total	**1268**

The relative frequency of those who owned Japanese cars previously who now bought American cars is

A. 59.9 %
B. 29.6%
C. 5.7%
D. 14.9%
E. 2.9%

2.1.3 Examine and use contingency tables.

2. A large national retailer of electronics conducted a survey to determine consumer preferences for various brands of digital cameras and the data are summarized in the table shown below.

	Female	Male	Total
Cannon Power Shot	73	59	**132**
Nikon Cool Pix	49	47	**96**
Sony Cyber Shot	58	33	**91**
Panasonic Lumix	35	30	**65**
Fujifilm Finepix	45	28	**73**
Olympus S/V	37	41	**78**
Other Brands	86	67	**153**
Total	**383**	**305**	**688**

The percentage of consumers who are male and prefer Fujifilm is

A. 44.3 % (305/688).
B. 10.6% (73/688).
C. 38.4% (28/73).
D. 56.2% (41/73).
E. 4.1% (28/688).

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2.1.3 Examine and use contingency tables.

3. A large national retailer of electronics conducted a survey to determine consumer preferences for various brands of digital cameras and the data are summarized in the table shown below.

	Female	Male	Total
Cannon Power Shot	73	59	**132**
Nikon Cool Pix	49	47	**96**
Sony Cyber Shot	58	33	**91**
Panasonic Lumix	35	30	**65**
Fujifilm Finepix	45	28	**73**
Olympus S/V	37	41	**78**
Other Brands	86	67	**153**
Total	**383**	**305**	**688**

Of the consumers who are male, the percentage who prefer Sony is

A. 44.3 % (305/688).
B. 10.8% (33/305).
C. 36.3% (33/91).
D. 4.8% (33/688).
E. 13.2% (91/688).

2.1.3 Examine and use contingency tables.

4. A large national retailer of electronics conducted a survey to determine consumer preferences for various brands of digital cameras and the data are summarized in the table shown below. Of the consumers who prefer Olympus, what percentage is female?

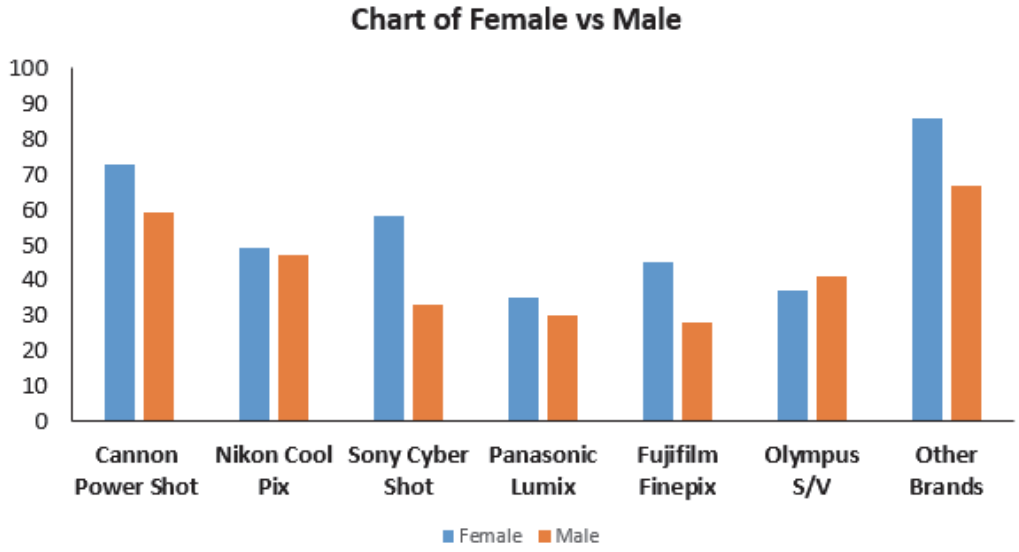
	Female	Male	Total
Cannon Power Shot	73	59	**132**
Nikon Cool Pix	49	47	**96**
Sony Cyber Shot	58	33	**91**
Panasonic Lumix	35	30	**65**
Fujifilm Finepix	45	28	**73**
Olympus S/V	37	41	**78**
Other Brands	86	67	**153**
Total	**383**	**305**	**688**

A. 47.4 % (37/78).
B. 6.0% (41/688).
C. 52.6% (41/78).
D. 11.7% (45/383).
E. 11.3% (78/688).

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2.2.3 Create and use frequency and relative frequency distributions and their displays.

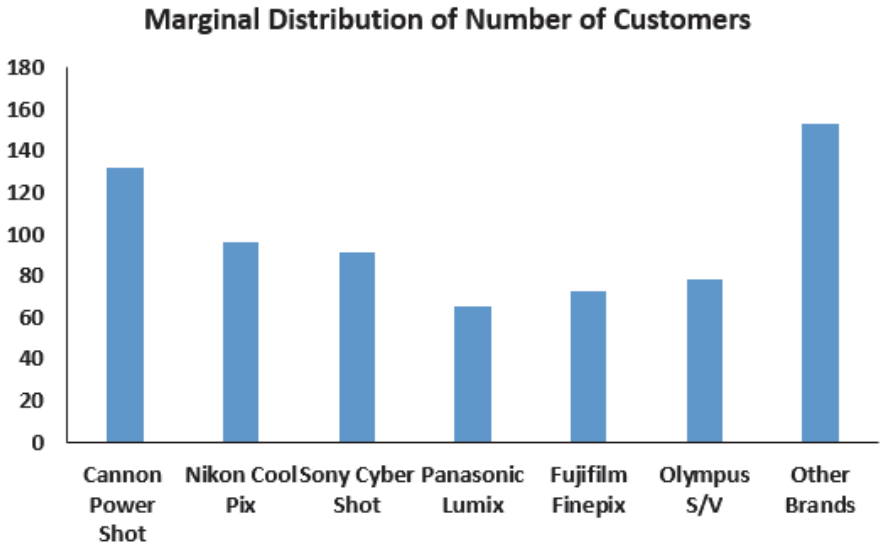
5. Based on the side-by-side bar chart summarizing consumer preferences for various brands of digital cameras by gender, which of the following statement(s) are true?



A. It appears that camera preference and gender are at least somewhat related.
B. If Other Brands are ignored, it appears that camera preference and gender are independent.
C. If Other Brands are ignored, it is not obvious that camera preference and gender are independent.
D. More males than females prefer Cannon.
E. More females than males prefer Sony.

2.2.3 Create and use frequency and relative frequency distributions and their displays.

6. The following is a bar chart summarizing consumer preferences for various brands of digital cameras.



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This bar chart shows

A. the marginal distribution of brands.
B. the conditional distribution of brands.
C. the contingency distribution of brands.
D. the distribution for a quantitative variable.
E. none of the above.

2.1.4 Find conditional and marginal distributions and make comparisons.

7. A company interested in the health of its employees started a health program including monitoring blood pressure. Based on age, employees were categorized according to ranges of blood pressure by age intervals. Data are shown in the table below.

	Age			
BP	**Under 30**	**30-49**	**Over 50**	**Total**
Low	27	38	31	96
Normal	48	90	92	230
High	23	59	72	154
Total	98	187	195	480

The percentage of employees who are over age 50 and have high blood pressure is

A. 46.8% (72/154).
B. 32.1% (154/480).
C. 31.6% (59/187).
D. 36.9% (72/195).
E. 15.0% (72/480).

2.1.4 Find conditional and marginal distributions and make comparisons.

8. A company interested in the health of its employees started a health program including monitoring blood pressure. Based on age, employees were categorized according to ranges of blood pressure by age intervals. Data are shown in the table below.

	Age			
BP	**Under 30**	**30-49**	**Over 50**	**Total**
Low	27	38	31	96
Normal	48	90	92	230
High	23	59	72	154
Total	98	187	195	480

Of all employees, the percentage who are over 50 and have high blood pressure is

A. 46.8% (72/154).
B. 15.0% (72/480).
C. 31.6% (59/187).
D. 36.9% (72/195).
E. 47.2% (92/195).

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2.1.4 Find conditional and marginal distributions and make comparisons.

9. A company interested in the health of its employees started a health program including monitoring blood pressure. Based on age, employees were categorized according to ranges of blood pressure by age intervals. Data are shown in the table below.

	Age			
BP	**Under 30**	**30-49**	**Over 50**	**Total**
Low	27	38	31	96
Normal	48	90	92	230
High	23	59	72	154
Total	98	187	195	480

Of all employees, the percentage of those under 50 years old is

A. 17.1% (82/480).
B. 40.6% (195/480).
C. 13.5% (65/480).
D. 36.9% (72/195).
E. 49.4% (285/480).

2.1.4 Find conditional and marginal distributions and make comparisons.

10. A company interested in the health of its employees started a health program including monitoring blood pressure. Based on age, employees were categorized according to ranges of blood pressure by age intervals. Data are shown in the table below. .

	Age			
BP	**Under 30**	**30-49**	**Over 50**	**Total**
Low	27	38	31	96
Normal	48	90	92	230
High	23	59	72	154
Total	98	187	195	480

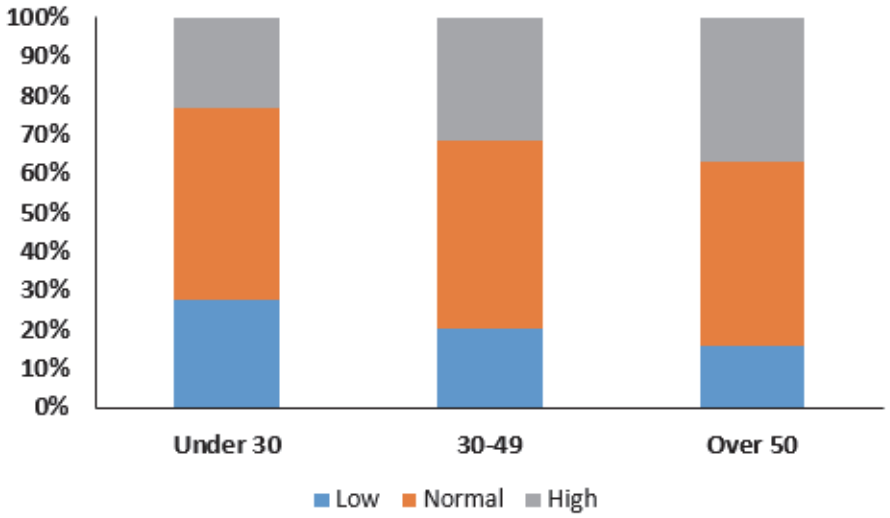
The percentage of employees with normal or low blood pressure is

A. 67.9% (326/480).
B. 47.9% (230/480).
C. 41.7% (96/230).
D. 80.0% (384/480).
E. 20.0% (96/480).

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2.2.3 Create and use frequency and relative frequency distributions and their displays.
11. Here is a stacked bar chart for data collected about employee blood pressure.



This chart shows

A. the distribution of a quantitative variable.
B. the contingency distribution of blood pressure type.
C. the conditional distribution of blood pressure type.
D. the marginal distribution of blood pressure type.
E. the joint distribution of blood pressure type.

2.5.4 Create and use frequency and relative frequency distributions and their displays.
12. A consulting firm examined the profit of two grocery stores and found that over the last year at Grocery Store A 66.7% of the months showed profit while at Grocery Store B 83.3% showed profit. The table below summarizes the findings.

	Months Profit	Months Loss	Total	% months profit
Grocery A	8	4	12	66.7%
Grocery B	10	2	12	83.3%

On closer investigation, it was observed that there was a difference in profit between stores that served wealthier neighborhoods versus less wealthy. The following tables were created:

Grocery stores serving wealthy neighborhoods:

	Months Profit	Months Loss	Total	% months profit
Grocery A	5	3	8	62.5%
Grocery B	5	2	10	50.0%

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Grocery stores serving less wealthy neighborhoods:

	Months Profit	Months Loss	Total	% months profit
Grocery A	2	2	4	50.0%
Grocery B	1	1	2	50.0%

What can be assumed about the profit of grocery stores?

A. Grocery Store B has more consistent profit overall.
B. It is clear that less wealthy neighborhoods will not yield these grocery store profits.
C. It is unclear how to predict the profit of these grocery stores based on the wealth of neighborhoods.
D. Grocery Store A showed less profit overall but showed greater profit in wealthier neighborhoods.
E. There is no difference in profit overall with grocery stores in either wealthier versus less wealthy neighborhoods.

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Chapter 2: Displaying and Describing Categorical Data – Quiz C – Key

1. B
2. E
3. B
4. A
5. A,C,E
6. A
7. D
8. B
9. E
10. A
11. C
12. D

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Chapter 2: Displaying and Describing Categorical Data– Quiz D – Multiple Choice
Name _____

2.1.3 Create and use frequency and relative frequency distributions and their displays.

1. A restaurant uses comment cards to get feedback from its customers about newly added items to the menu. It recently introduced homemade organic veggie burgers. Customers who tried the new burger were asked if they would order it again. The data are summarized in the table below. What percentage of customers would definitely order the veggie burger again?

Response	***Frequency***
Definitely would.	10
Most likely would.	40
Maybe	12
Definitely would not.	3

A. 10%
B. 15%
C. 20%
D. 40%
E. 77%

2.1.3 Create and use frequency and relative frequency distributions and their displays.

2. A restaurant uses comment cards to get feedback from its customers about newly added items to the menu. It recently introduced homemade organic veggie burgers. Customers who tried the new burger were asked if they would order it again. The data are summarized in the table below. What percentage of customers would most likely or definitely order the veggie burger again?

Response	***Frequency***
Definitely would.	10
Most likely would.	40
Maybe	12
Definitely would not.	3

A. 10%
B. 15%
C. 40%
D. 50%
E. 77%

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2.2.1 Determine if displays of data are appropriate.

3. A restaurant uses comment cards to get feedback from its customers about newly added items to the menu. It recently introduced homemade organic veggie burgers. Customers who tried the new burger were asked if they would order it again. Which of the following would be an appropriate method for displaying the data shown in the table?

Response	***Frequency***
Definitely would.	10
Most likely would.	40
Maybe	12
Definitely would not.	3

A. Contingency table.
B. Segmented bar chart.
C. Pie chart.
D. Both A and B.
E. Both B and C.

2.2.1 Determine if displays of data are appropriate.

4. In May, 2010, the *Pew Research Center for the People & the Press* carried out a national survey to gauge opinion on the Arizona Immigration Law. Responses (*Favor, Oppose, Don't Know*) were examined according to groups defined by political party affiliation (*Democrat, Republican, Independent*). Which of the following would be appropriate for displaying these data?

A. Contingency table.
B. Pie charts.
C. Segmented bar chart.
D. Side by side bar chart.
E. All of the above.

2.1.3 Examine and use contingency tables.

5. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law (results shown below). How many respondents are Republican and favor the law?

Response	***Democrat***	***Republican***	***Independent***
Favor	50	93	35
Oppose	85	45	60
Don't Know	5	7	20

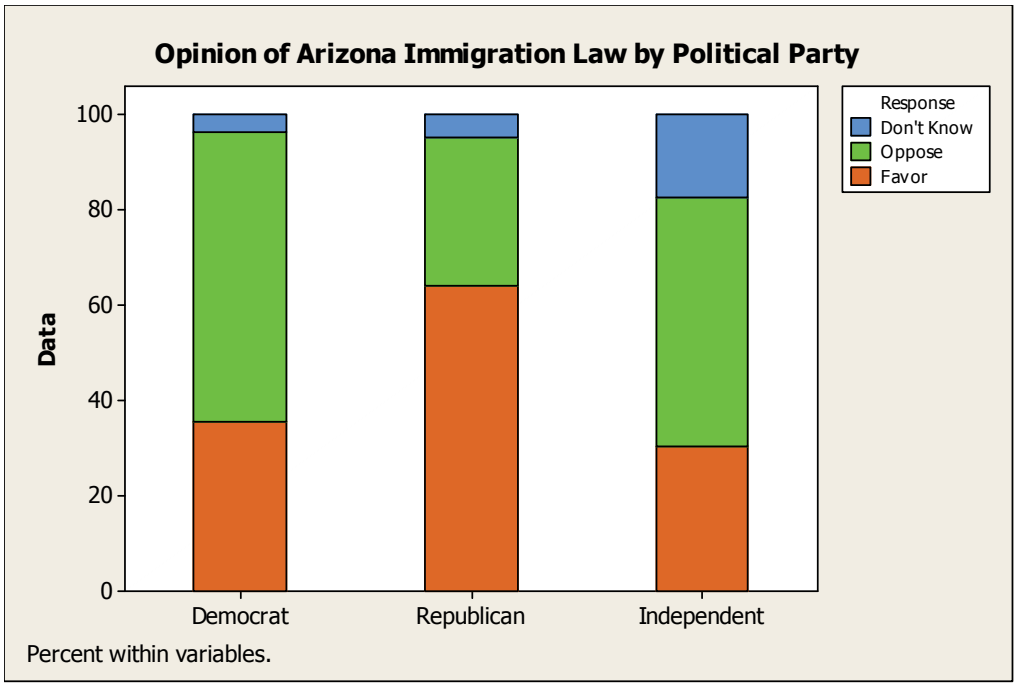
A. 93
B. 45
C. 145
D. 7
E. 85

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2.2.3 Create and use frequency and relative frequency distributions and their displays.

6. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law. The results are displayed in the segmented bar chart below. Which of the following statements is true?



A. A greater percentage of Republicans oppose the law compared to Democrats.
B. A greater percentage of Republicans oppose the law compared to Independents.
C. Opinion about the law appears to be independent of political party affiliation.
D. A greater percentage of Democrats oppose the law compared to Republicans.
E. The segmented bar chart is not appropriate for these data.

2.1.4 Find conditional and marginal distributions and make comparisons.

7. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law. Based on the results displayed in the table below, what percent of respondents is Independent?

Response	***Democrat***	***Republican***	***Independent***
Favor	50	93	35
Oppose	85	45	60
Don't Know	5	7	20

A. 35%
B. 9%
C. 29%
D. 45%
E. 25%

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2.1.4 Find conditional and marginal distributions and make comparisons.
8. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law (results shown below). What percent oppose the law?

Response	***Democrat***	***Republican***	***Independent***
Favor	50	93	35
Oppose	85	45	60
Don't Know	5	7	20

A. 48%
B. 45%
C. 32%
D. 25%
E. 61%

2.1.4 Find conditional and marginal distributions and make comparisons.
9. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law (results shown below). Of respondents who are Democrat, what percent oppose the law?

Response	***Democrat***	***Republican***	***Independent***
Favor	50	93	35
Oppose	85	45	60
Don't Know	5	7	20

A. 13%
B. 35%
C. 22%
D. 45%
E. 61%

2.1.4 Find conditional and marginal distributions and make comparisons.
10. A regional survey was carried out to gauge public opinion on the controversial Arizona Immigration Law (results shown below). Of respondents who oppose the law, what percent is Democrat?

Response	***Democrat***	***Republican***	***Independent***
Favor	50	93	35
Oppose	85	45	60
Don't Know	5	7	20

A. 13%
B. 35%
C. 22%
D. 45%
E. 6

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Chapter 2: Displaying and Describing Categorical Data – Quiz D – Key

1. B
2. E
3. C
4. E
5. A
6. D
7. C
8. A
9. E
10. D

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Chapter 2: Displaying and Describing Categorical Data– Quiz E – Multiple Choice
Name_____

2.1.3 Create and use frequency and relative frequency distributions and their displays.
1. A clothing store uses comment cards to get feedback from its customers about newly added items. It recently introduced plus size fashion wear. Customers who purchased the items were asked to fill out an online comment survey giving 10% off the next purchase. The data are summarized in the table below. What percentage of customers were at least satisfied with the item(s) purchased (Satisfied or Very satisfied)?

Response	***Frequency***
Very satisfied.	15
Satisfied.	30
Less than fully satisfied.	12
Not satisfied.	4

A. 49.2%
B. 73.8%
C. 24.6%
D. 26.2%
E. 68.9%

2.1.3 Create and use frequency and relative frequency distributions and their displays.
2. A clothing store uses comment cards to get feedback from its customers about newly added items. It recently introduced plus size fashion wear. Customers who purchased the items were asked to fill out an online comment survey giving 10% off the next purchase. The data are summarized in the table below. What percentage of customers would be less likely to purchase another item (Less or Not fully satisfied)?

Response	***Frequency***
Very satisfied.	15
Satisfied.	30
Less than fully satisfied.	12
Not satisfied.	4

A. 10%
B. 15%
C. 40%
D. 50%
E. 77%

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2.2.1 Determine if displays of data are appropriate.

3. A clothing store uses comment cards to get feedback from its customers about newly added items. It recently introduced plus size fashion wear. Customers who purchased the items were asked to fill out an online comment survey giving 10% off the next purchase. The data are summarized in the table below. Which of the following would be an appropriate method for displaying the data shown in the table?

Response	***Frequency***
Very satisfied.	15
Satisfied.	30
Less than fully satisfied.	12
Not satisfied.	4

A. Contingency table.
B. Segmented bar chart.
C. Pie chart.
D. Both A and B.
E. Both B and C.

2.2.1 Determine if displays of data are appropriate.

4. Accenture, a consulting firm, conducted an online survey of 500 US consumers in September 2013. Based on their response to the question "What is your motive for shopping late in the season?" which of the following would be an appropriate method for displaying the data shown in the table?

Response	***Male***	***Female***
Too busy to shop earlier	115	75
More time to save for gifts	50	80
Better discounts available	65	20
Part of the holiday tradition	15	5
None of the above	120	60

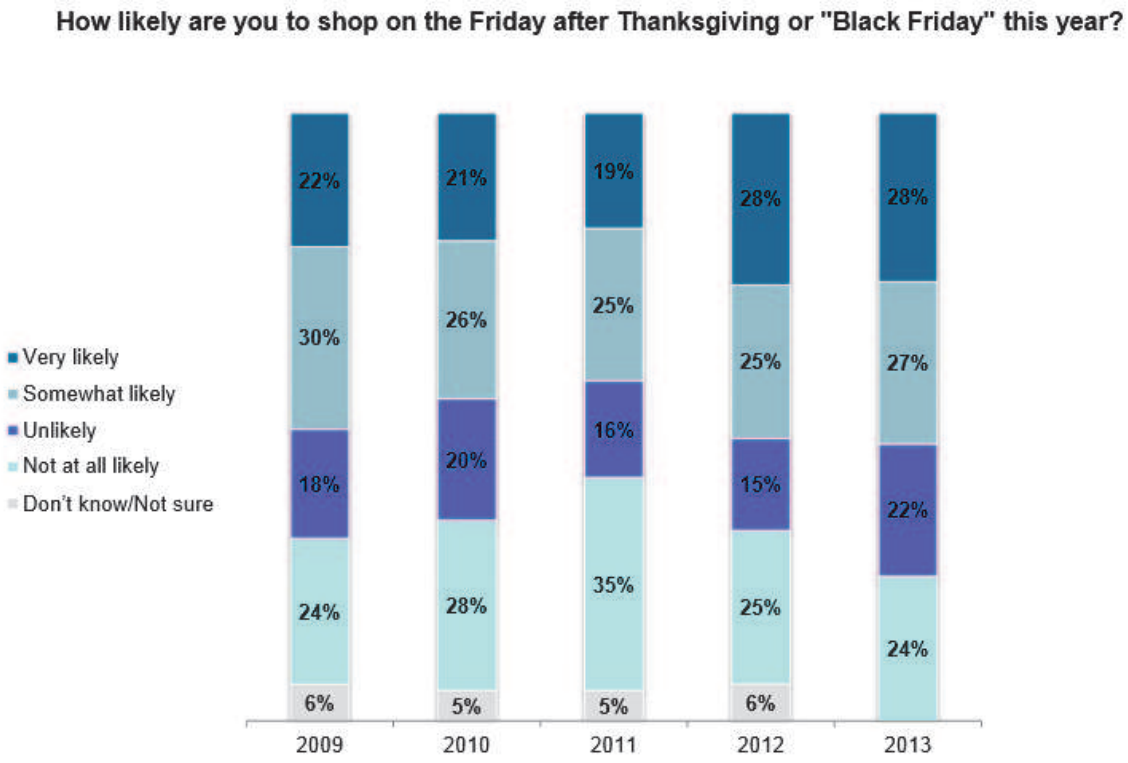
A. Contingency table.
B. Pie charts.
C. Segmented bar chart.
D. Side by side bar chart.
E. All of the above.

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2.3. Examine a contingency table.

5. Accenture, a consulting firm, conducted an online survey of 500 US consumers from 2009 to 2013. The results are displayed in the segmented bar chart below. How many respondents in 2012 are at least somewhat likely to shop on "Black Friday"?



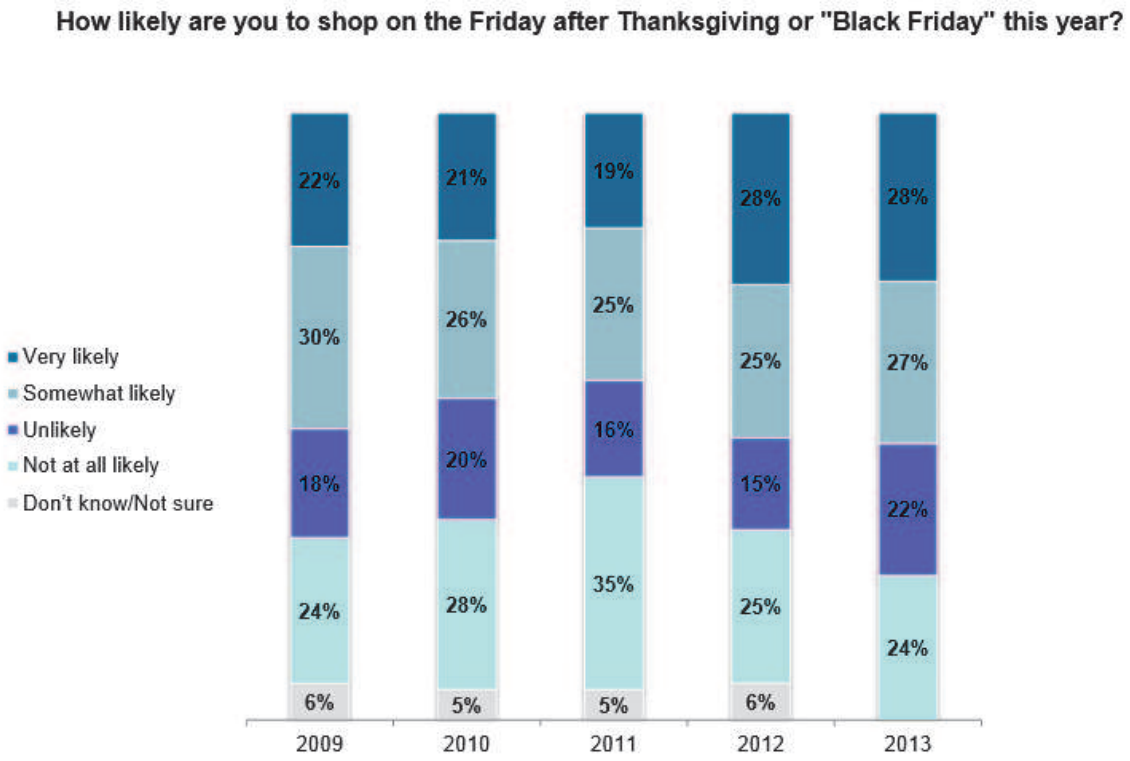
A. 265
B. 275
C. 140
D. 230
E. 95

2.2. Determine if a display of data is appropriate.

6. Accenture, a consulting firm, conducted an online survey of 500 US consumers from 2009 to 2013. The results are displayed in the segmented bar chart below. Which of the following statement(s) is (are) true?

A. A smaller percentage of shoppers over the past 5 years are undecided about shopping on "Black Friday".
B. In 2013, there was an increase in Very likely to shop on "Black Friday" over 2012.
C. From 2011 to 2013, there was a decrease in Not at all likely to shop on "Black Friday".
D. A greater percentage of shoppers over the past 5 years are at least somewhat likely to shop on "Black Friday".
E. The segmented bar chart is not appropriate for these data.

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2.1.4 Find conditional and marginal distributions and make comparisons.

7. Accenture, a consulting firm, conducted an online survey of 500 US consumers from in 2013.

Response	***Male***	***Female***
Too busy to shop earlier	115	75
More time to save for gifts	50	80
Better discounts available	65	20
Part of the holiday tradition	15	5
None of the above	120	60

What percentage of men were felt that better discounts were available on "Black Friday"?

A. 26.5%
B. 65%
C. 20%
D. 17.8%
E. 5.5%

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2.1.4 Find conditional and marginal distributions and make comparisons.

8. Accenture, a consulting firm, conducted an online survey of 500 US consumers from in 2013.

Response	***Male***	***Female***
Too busy to shop earlier	115	75
More time to save for gifts	50	80
Better discounts available	65	20
Part of the holiday tradition	15	5
None of the above	120	60

What percentage of those who thought that better discounts were available on "Black Friday" were female?

A. 81.3%
B. 33.3%
C. 11.1%
D. 47.2%
E. 23.5%

2.1.4 Find conditional and marginal distributions and make comparisons.

9. Accenture, a consulting firm, conducted an online survey of 500 US consumers in September 2013. Based on their response to the question "What is your motive for shopping late in the season?" which of the following would be appropriate method(s) for displaying the male only data shown in the table?

Response	***Male***	***Female***
Too busy to shop earlier	115	75
More time to save for gifts	50	80
Better discounts available	65	20
Part of the holiday tradition	15	5
None of the above	120	60

A. Contingency table.
B. Pie chart.
C. Segmented bar chart.
D. Side by side bar chart.
E. All of the above.

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2.1.4 Find conditional and marginal distributions and make comparisons.

10. Accenture, a consulting firm, conducted an online survey of 500 US consumers in September, 2013.

Response	***Male***	***Female***
Too busy to shop earlier	115	75
More time to save for gifts	50	80
Better discounts available	65	20
Part of the holiday tradition	15	5
None of the above	120	60

What percentage of consumers thought that shopping on "Black Friday" is part of the holiday tradition?

A. 8.3%
B. 33.3%
C. 11.1%
D. 12.5%
E. 75.0%

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Chapter 2: Displaying and Describing Categorical Data – Quiz E – Key

1. B
2. E
3. C
4. E
5. A
6. C,D
7. D
8. E
9. B,C
10. C

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