

Student
Date
Time:

Assignment: Unit VII Homework

Fields,
Course: MAT1301-14A-2B16-S1
Book: Pimoto: Mathematics All Around,
5e

1. The following data represent the number of potholes on 35 randomly selected 1-mile stretches of highway around a particular city. Construct a frequency table, a relative frequency table, and a bar graph for the data.

Number of Potholes				
1	3	3	1	4
7	5	1	3	6
1	2	1	1	1
7	1	6	2	7
1	6	4	4	1
1	5	3	5	2
3	2	4	1	3

Construct a frequency table for the data.

Potholes	Frequency
1	☐
2	☐
3	☐
4	☐
5	☐
6	☐
7	☐
Total	35

Construct a relative frequency table for the data.

Potholes	Relative Frequency
1	☐
2	☐
3	☐
4	☐
5	☐
6	☐
7	☐
Total	1.0000

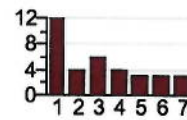
(Round to four decimal places as needed.)

Construct a bar graph for the data. Choose the correct graph below.

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1.
(cont.)

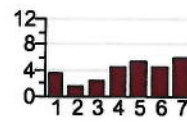
☐ A.



☐ B.



☐ C.



☐ D.



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2. The following data show the number of passengers per car on a train. Construct a frequency table, a relative frequency table, and a bar graph for the data given.
- 60 63 64 52 60 58 63 53 56
 64 48 54 64 57 51 67 60 49
 59 50 48 52 53 60 58 60 64
 52 56 66 58 66 59 62 50 58
 53 51 65 62 61 55 59 52 62
 58 61 65 56 55 50 56 62 54

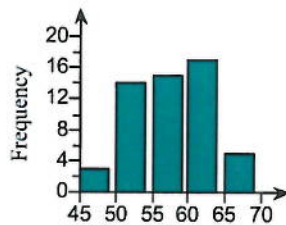
Construct grouped frequency and relative frequency distributions.

Number of Passengers	Frequency	Relative Frequency
45-49	3	5.6%
50-54		25.9%
55-59	15	%
60-64	17	31.5%
65-69		%

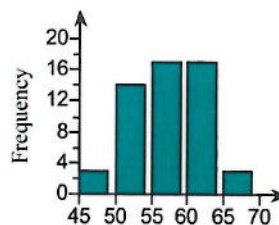
(Round to the nearest tenth as needed.)

Construct a bar graph. Choose the correct graph below.

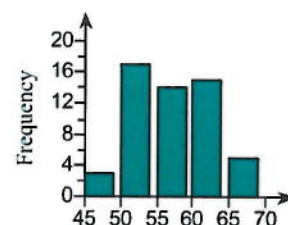
☐ A.



☐ B.



☐ C.

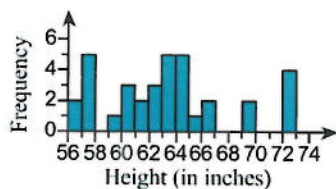


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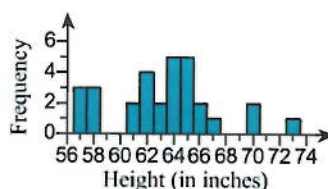
3. At the same time that heights of the boys at a High School were studied, heights of the girls were also studied. Draw a histogram to summarize the data set that follows, which gives the heights, to the nearest inch, of 30 girls at the High School. Use intervals one unit wide centered at the whole-number values 56, 57, . . . , 74.
- | | | | | | |
|----|----|----|----|----|----|
| 57 | 61 | 63 | 64 | 65 | 67 |
| 57 | 61 | 63 | 64 | 65 | 67 |
| 58 | 61 | 63 | 64 | 65 | 70 |
| 58 | 62 | 64 | 65 | 66 | 70 |
| 60 | 62 | 64 | 65 | 66 | 73 |

Choose the correct histogram below.

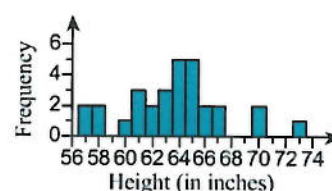
☐ A.



☐ B.



☐ C.

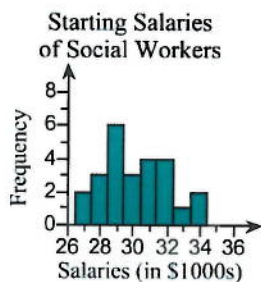


4. Starting salaries (in thousands of dollars) for social workers with a bachelor of science degree and no experience are shown for a random sample of 25 different social workers. Construct a histogram for the data given.

27	29	29	31	32
27	29	30	31	32
28	29	30	31	33
28	29	30	32	34
28	29	31	32	34

Choose the correct histogram below.

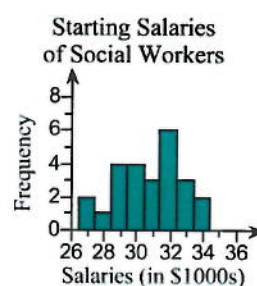
☐ A.



☐ B.



☐ C.



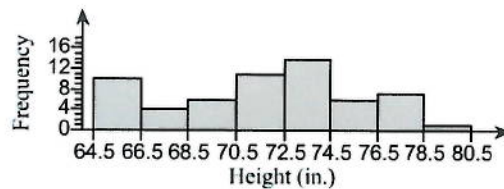
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5. The following are the heights (in inches) of the players in four basketball teams for a recent season. Use classes of width 2 starting at 64.5 to construct a histogram.

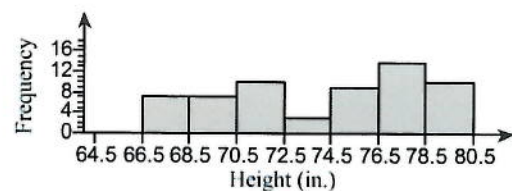
 Click here to view the heights of the players.

Choose the correct histogram below.

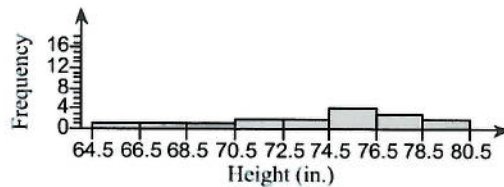
☐ A.



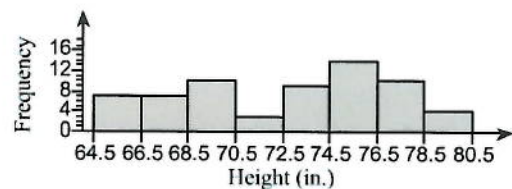
☐ B.



☐ C.



☐ D.



Height of players

Team A	72, 70, 75, 76, 75, 79, 78, 72, 78, 75, 66, 80, 68, 78, 73, 73
Team B	78, 70, 70, 73, 77, 75, 76, 75, 75, 74, 69, 66, 77, 75, 66, 70
Team C	73, 73, 73, 66, 76, 74, 70, 79, 79, 67, 65, 68, 67, 67, 71, 65
Team D	69, 75, 70, 69, 78, 69, 67, 76, 76, 65, 74, 77, 77, 77, 67, 75

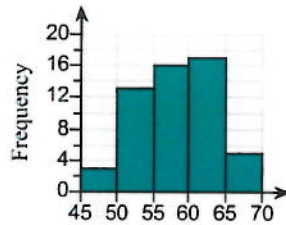
1

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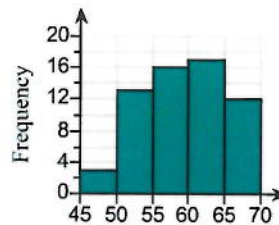
6. The scores of the 54 members of a sociology lecture class on a 70-point exam are listed to the right. Use five classes with a uniform class width of 5 points, and use a lower limit of 45 points for the first class to construct a histogram.
- 60 63 64 52 60 58 63 53 56
64 48 54 64 57 51 67 60 49
59 68 48 52 53 60 58 60 64
52 56 66 58 66 59 62 50 58
53 51 65 62 61 55 59 52 62
58 61 55 56 55 50 56 62 54

Choose the correct graph below.

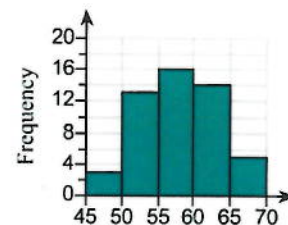
☐ A.



☐ B.



☐ C.



7. Represent the two sets of data on a single stem-and-leaf display.

A:	29	32	36	43	48	43	22	38	42	39
	37	33	42	18	22	39	21	26	18	42
B:	32	38	22	39	21	26	28	16	11	20
	21	29	22	25	33	47	23	22	18	33

Choose the correct answer below.

☐ A.

A			B	
8	8	1	1	6 8
9	6 2 2 1	2	0	1 1 2 2 2 3 5 6 8 9
9	9 8 7 6 3 2	3	2	3 3 8 9
	7	4	8	3 3 2 2 2

☐ B.

A			B	
8	8	1	1	6 8
9	6 2 2 1	2	0	1 1 2 2 2 3 5 6 8 9
9	9 8 7 6 3 2	3	2	3 3 8 9
	8	3 3 2 2 2	4	7

☐ C.

A			B	
			1	6 8
			1	8 8
0	1 1 2 2 2 3 5 6 8 9	2	9	6 2 2 1
	2 3 3 8 9	3	9	9 8 7 6 3 2
	7	4	8	3 3 2 2 2

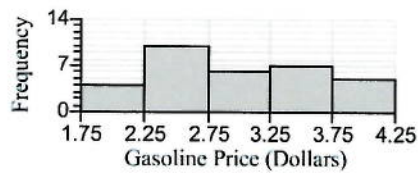
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8. The following table contains the average price of one gallon of unleaded regular gasoline for 2009 to 2011. Use classes of width 50 cents, starting at \$1.75 to construct a histogram. If a number is on a class boundary, add it to the higher class.

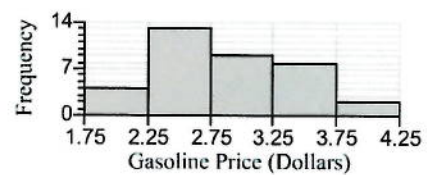
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2009	1.78	1.86	1.97	2.08	2.29	2.62	2.54	2.62	2.57	2.56	2.61	2.64
2010	2.68	2.62	2.77	2.82	2.83	2.73	2.73	2.75	2.69	2.78	2.84	2.97
2011	3.05	3.16	3.53	3.83	3.97	3.68	3.64	3.62	3.58	3.58	3.42	3.28

Choose the correct histogram below.

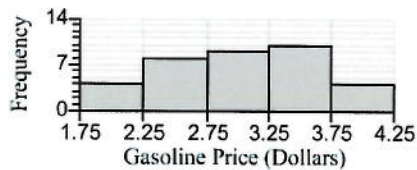
☐ A.



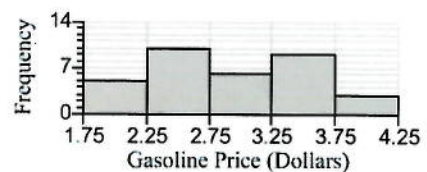
☐ B.



☐ C.

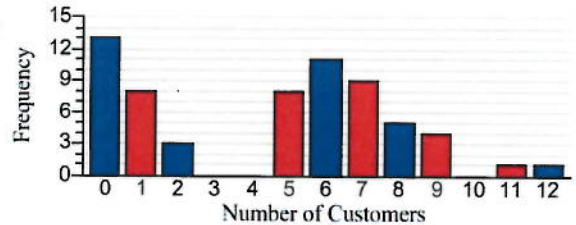


☐ D.



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9. The manager at a coffee shop counted the customers once each hour over a few busy weekends. The results she obtained are summarized in the bar graph to the right; use it to answer parts a through e.



- a. What was the smallest number of customers in the coffee shop, and how often did it occur?

The smallest number of customers was . It occurred time(s).

- b. What was the largest number of customers in the coffee shop, and how often did it occur?

The largest number of customers was . It occurred time(s).

- c. What was the most frequently occurring nonzero customer count?

The most frequently occurring nonzero customer count was .

- d. For how many hours were the customers counted?

hours

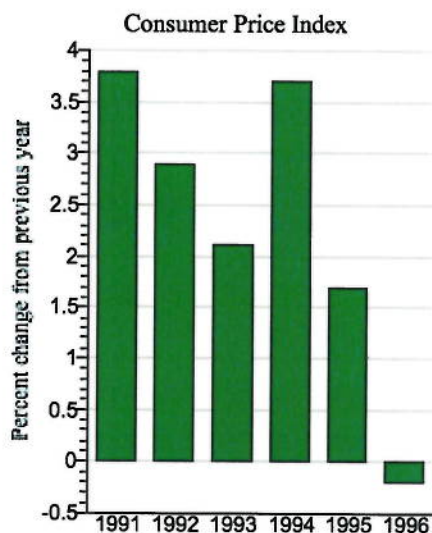
- e. For what fractional part of the total number of hours were there more than seven customers in the coffee shop?

(Type an integer or a simplified fraction.)

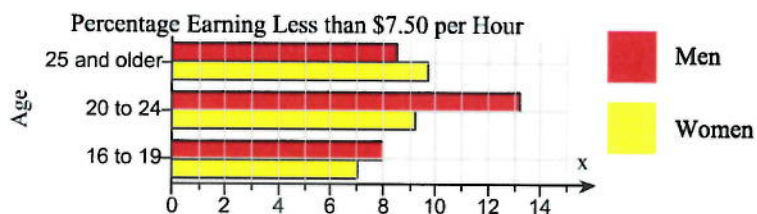
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10. The bar graph below shows trends in several economic indicators over the period 1991 – 1996. Which year had the highest consumer price index?

The highest consumer price index occurred in the year .



11. The following bar graph compares women's and men's hourly wages in a recent year.



What percent of women ages 20 to 24 earned \$7.50 or less per hour?

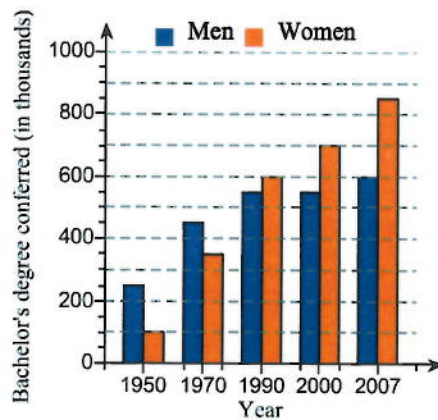
Read the graph to find the percentage of women ages 20-24 who earned less than \$7.50.

% (Type an integer or decimal rounded to the nearest tenth as needed.)

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12. Side-by-side bar graphs allow for comparisons. The one shown below provides data on the number of bachelor's degrees conferred to men and to women in selected years.

In which years were more bachelor's degrees conferred to men than to women?



The answer is .
 (Use a comma to separate answers as needed.)

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13. A cosmetic company gives sales training to its newly hired employees. To determine how effective the training is, the firm compared the monthly sales of a group that has completed the training with a group that has not. The numbers to the right indicate thousands of dollars of sales last month. Represent the two sets of data on a single stem-and-leaf display. Does the orientation program seem to be succeeding?

	29 32 36 43 47
With Training	43 25 38 42 39
	39 21 26 18 42
	26 28 14 13 20
No Training	21 29 22 25 33
	45 23 22 18 37

Choose the correct answer below.

☐ A.

With Training	No Training
8 1	3 4 8
9 6 5 1	2 0 1 2 2 3 5 6 8 9
9 9 8 6 2	3 3 7
7 3 3 2 2	4 5

☐ B.

With Training	No Training
3 4 8	1 8
0 1 2 2 3 5 6 8 9	2 9 6 5 1
3 7	3 9 9 8 6 2
5 4	4 7 3 3 2 2

☐ C.

With Training	No Training
8 1	3 4 8
9 6 5 1	2 0 1 2 2 3 5 6 8 9
9 9 8 6 2	3 3 7
5 4	7 3 3 2 2

☐ D.

With Training	No Training
7 3 3 2 2	1 3 4 8
9 6 5 1	2 0 1 2 2 3 5 6 8 9
9 9 8 6 2	3 3 7
5 4	8

Does the orientation program seem to be succeeding?

- ☐ A. The orientation program is working because the sales of the trained employees are lower than the employees who were not trained.
- ☐ B. The orientation program is not working because the sales of the trained employees are lower than the employees who were not trained.
- ☐ C. The orientation program is working because the sales of the trained employees are higher than the employees who were not trained.
- ☐ D. The orientation program is not working because the sales of the trained employees are higher than the employees who were not trained.

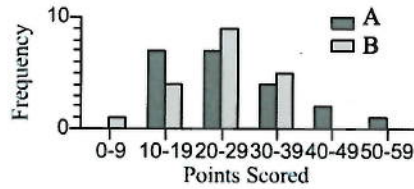
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14. The points scored by Division A and Division B in the championship game in a recent 20-year period are given to the right. Use classes of width 9 points, starting at 0 to construct a back to back graph of the data.

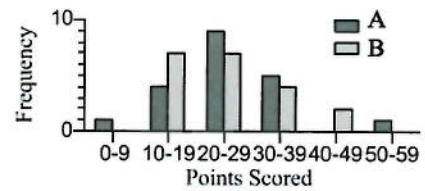
A	30	23	30	21	10	10	31	23	24	48
	10	7	21	17	26	32	27	49	31	52
B	21	10	10	27	17	26	23	24	30	23
	25	32	19	32	31	23	10	26	19	10

Choose the correct graph below.

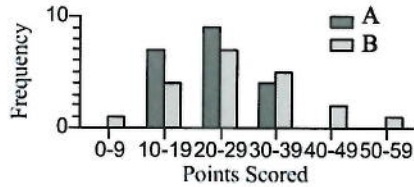
☐ A.



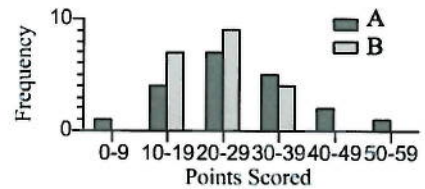
☐ B.



☐ C.



☐ D.



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15. Find the mean, median, and mode for the following distribution.

4, 11, 4, 11, 7, 10, 9, 10, 16

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
(Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
(Type an integer or a decimal.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
(Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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16. Find the mean, median, and mode for the following distribution.

3, 7, 3, 7, 5, 6, 9, 6, 14, 17

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
(Type an integer or a decimal.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
(Type an integer or a decimal.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
(Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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17. Find the mean, median, and mode for the following distribution.

5, 6, 5, 6, 3, 7, 8, 7, 11, 14

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
(Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

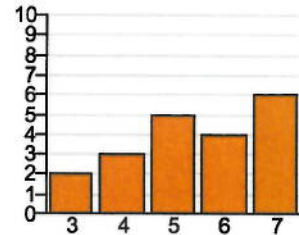
- ☐ A. The median is .
(Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
(Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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18. Use the given graph to find the mean, median, and mode of the distribution.



Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
- (Type an integer or a decimal.)
- ☐ B. There is no mean for this distribution.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

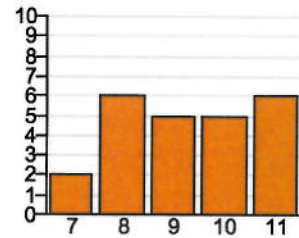
- ☐ A. The median is .
- (Type an integer or a decimal.)
- ☐ B. There is no median for this distribution.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
- (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for this distribution.

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19. Use the given graph to find the mean, median, and mode of the distribution.



Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
- (Type an integer or decimal rounded to two decimal places as needed.)
- ☐ B. There is no mean for this distribution.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
- (Type an integer or a decimal.)
- ☐ B. There is no median for this distribution.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
- (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for this distribution.

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20. Find the mean, median, and mode for the following frequency distribution.

x	f
2	5
3	8
4	4
5	1
6	7
7	4
8	5

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
 (Round to two decimal places as needed.)
- ☐ B. There is no solution.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
 (Type an integer or a decimal.)
- ☐ B. There is no solution.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
 (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no solution.

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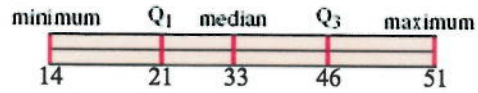
21. (a) Give the five-number summary for the distribution, and (b) draw a box-and-whisker plot.
14, 21, 26, 16, 26, 33, 47, 16, 41, 26, 34, 38, 49, 46, 51

(a) The five-number summary for this data set is , , , , .

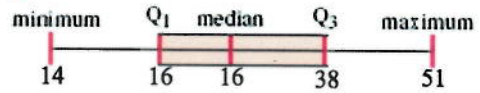
(Use ascending order. Simplify your answers.)

(b) Choose the correct box-and-whisker plot.

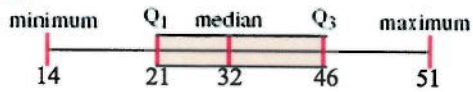
☐ A.



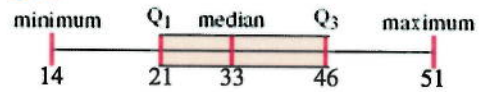
☐ B.



☐ C.



☐ D.



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22. A group of 20 students were asked how many times they visit a certain website per week and the following results were obtained. Find the mean, median, and mode for the distribution.

13, 4, 18, 4, 10, 17, 21, 23, 21, 26, 6, 25, 24, 21, 15, 9, 3, 20, 16, 4

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
 (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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Book: Pimot: Mathematics All Around,
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23.	Ted tossed a frisbee as far as he could 15 times. The following distances, in feet, were recorded. Find each measure of central tendency.	174	102	188	258	111
		206	104	203	268	210
		148	220	130	149	218

Select the correct choice below and fill in any answer boxes within your choice.

- ☐ A. There is no mean.
- ☐ B. The mean is . (Round to the nearest thousandth as needed.)

Select the correct choice below and fill in any answer boxes within your choice.

- ☐ A. There is no median.
- ☐ B. The median is . (Type a whole number.)

Select the correct choice below and fill in any answer boxes within your choice.

- ☐ A. The mode is . (Use a comma to separate answers as needed.)
- ☐ B. There is no mode.

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 Book: Pirnot: Mathematics All Around,
 5e

24. According to a popular website, here are the earnings in millions of dollars of a number of deceased celebrities for 2011. Find the mean, median, and mode for the following distribution.

22 8 17 8 4 14 20 14 28 23

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
 (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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25. Many believe that excess carbon dioxide in the atmosphere contributes to global warming. Below are the results from one study on the concentrations of carbon dioxide in the atmosphere in parts per million from 2000 to 2009. Complete a) through c) below.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CO ₂	346	304	379	304	379	352	348	352	375	344

a) Determine the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
(Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

b) Determine the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
(Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no median for these data.

c) Determine the mode(s). Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
(Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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26. A local health club surveyed the number of days that 20 of its members visited the club during the past month. The results are given below. Find the mean, median, and mode for the following distribution.

6, 15, 7, 14, 6, 13, 6, 15, 14, 18, 8, 18, 13, 8, 18, 11, 8, 20, 6, 18

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
 (Type an integer or decimal rounded to one decimal place as needed.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
 (Type an integer or a decimal. Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

27. Many colleges assign numerical points to grades as A – 4, B – 3, C – 2, D – 1, and F – 0. Find the grade point average for the following semester grade report.

Course	Credits	Grade
Math	3	F
English	4	C
Physics	4	D
German	2	F
History	4	A

The grade point average is . (Round to the nearest hundredth.)

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28. The mean number of hours that Raphael worked over the past four weeks is 37.25. If he works 39 hours this week, what will the mean number of hours be that he will have worked over the five-week period?

What is the five-week mean?

(Simplify your answer.)

29. The number of miles per gallon (MPG) for 62 foreign cars is given in the following frequency table. Find the mean, median, and mode for these data.

MPG	19	20	21	22	23	24	25	26	27	28	29	30
Frequency	2	6	4	3	5	7	8	8	3	7	7	2

Find the mean. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mean is approximately .
- (Type an integer or decimal rounded to the nearest tenth as needed. Use a comma to separate answers as needed.)
- ☐ B. There is no mean for these data.

Find the median. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The median is .
- (Use a comma to separate answers as needed.)
- ☐ B. There is no median for these data.

Find the mode. Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The mode is .
- (Use a comma to separate answers as needed.)
- ☐ B. There is no mode for these data.

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30. To get a B in math, Alexandria Pappas must average 80 on five tests. Scores on the first four tests were 83, 73, 81, and 79. What is the lowest score that she can get on the last test and still get a B?

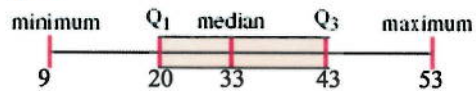
The lowest possible score for getting a B is .

31. The following are the number of home runs hit by home run champions for the years 1975 to 1989. Draw a box-and-whisker plot for the distribution of the number of home runs.

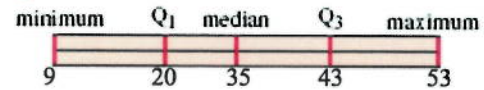
9, 20, 27, 18, 29, 35, 46, 19, 43, 29, 35, 37, 49, 43, 53

Choose the correct answer below.

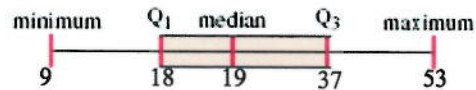
☐ A.



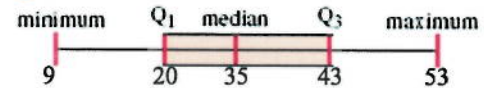
☐ B.



☐ C.

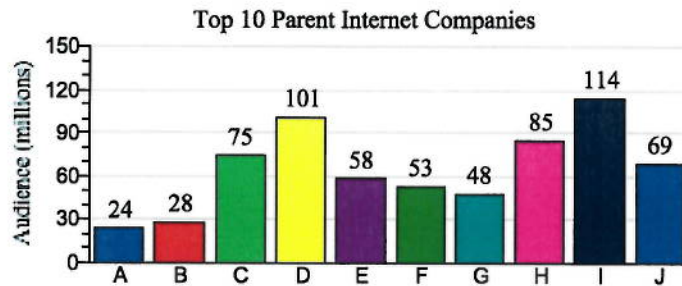


☐ D.

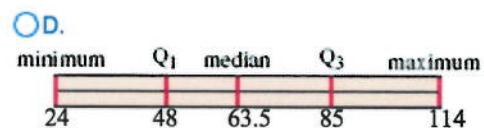
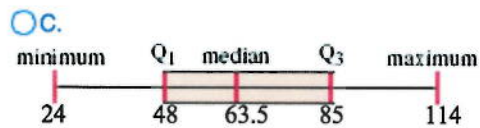
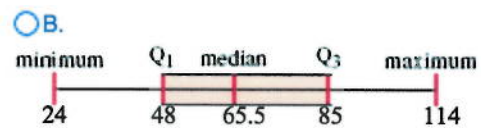
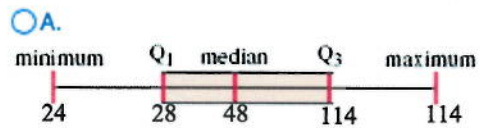


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32. Draw a box-and-whisker plot of the data presented in the graph.



Which is the correct box-and-whisker plot?



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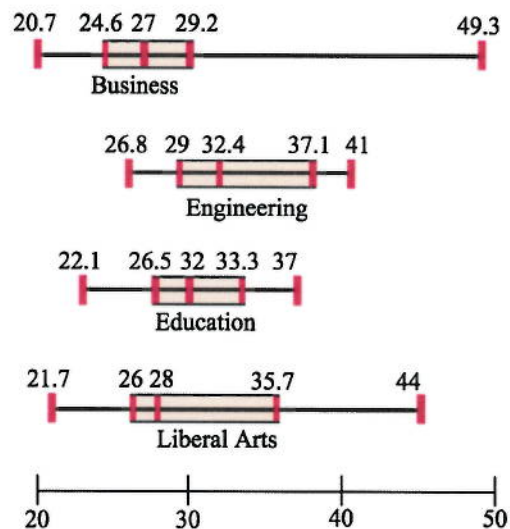
33. A college placement office has made a comparative study of the starting salaries for graduates in various majors. The following box-and-whisker plots describe the starting salaries for business, education, engineering, and liberal arts.

 Click on the icon to view the box-and-whiskers plots.

Which major, in general, receives the worst salary offers?

- ☐ A. Business
☐ B. Education
☐ C. Liberal Arts
☐ D. Engineering

Starting salaries in thousands



Course: MAT1301-14A-2B16-S1
Book: Pimot: Mathematics All Around,
5e

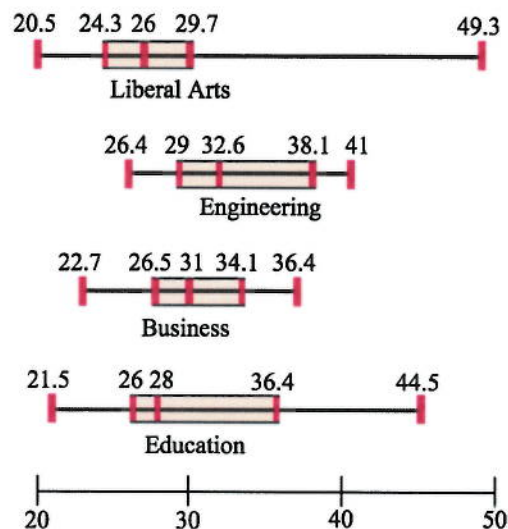
34. A college placement office has made a comparative study of the starting salaries for graduates in various majors. The following box-and-whisker plots describe the starting salaries for business, education, engineering, and liberal arts. If a student wants to receive \$32,200 or more for a starting salary, which major offers the best chance of achieving that?

 Click the icon to view the box-and-whiskers plots.

If a student wants to receive \$32,200 or more for a starting salary, which major offers the best chance of achieving that?

- ☐ A. Business
☐ B. Engineering
☐ C. Liberal Arts
☐ D. Education

Starting salaries in thousands



Course: MAT1301-14A-2B16-S1
 Book: Pirnot: Mathematics All Around,
 5e

35. A college placement office has made a comparative study of the starting salaries for graduates in various majors. The following box-and-whisker plots describe the starting salaries for business, education, engineering, and liberal arts. Does education or business have the higher median salary? Does this imply that salaries in education are generally higher than those in business?

 Click the icon to view the box-and-whiskers plots.

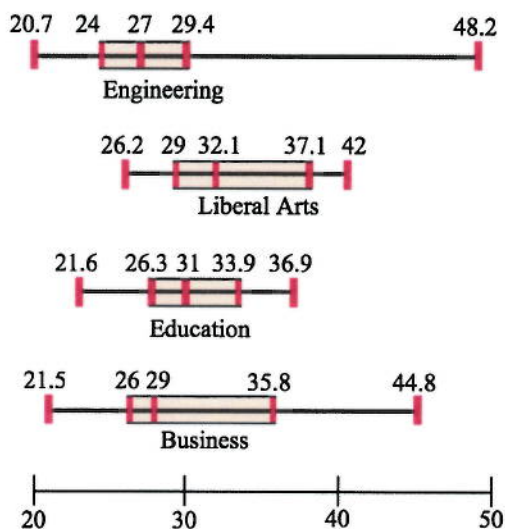
Does education or business have the higher median salary?

- ☐ Education
- ☐ Business

Do the results imply that salaries in the major with the higher median salary are generally higher than those in the major with the lower median salary?

- ☐ No
- ☐ Yes

Starting salaries in thousands



Course: MAT1301-14A-2B16-S1
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5e

35.

(cont.)

36. Find the range, mean, and standard deviation of the following data set.

{7, 8, 9, 10, 11, 12, 13, 14, 15, 16}

The range is .

(Type a whole number.)

The mean is .

(Type a decimal rounded to one decimal place as needed.)

The standard deviation is .

(Do not round until the final answer. Then round to three decimal places as needed.)

37. Find the range, mean, and standard deviation of the data set.

{2, 5, 8, 10, 14, 15}

The range is .

(Type a whole number.)

The mean is .

(Type an integer or decimal.)

The standard deviation is .

(Do not round until the final answer. Then round to two decimal places as needed.)

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5e

38. Find the range, mean, and standard deviation of the data set.

{5, 14, 5, 11, 11, 17, 18, 7}

The range is .

(Type a whole number.)

The mean is .

(Type an integer or a decimal.)

The standard deviation is .

(Round the final answer to two decimal places as needed. Round all intermediate values to three decimal places as needed.)

39. Determine the range, mean, and standard deviation of the data set.

{18, 3, 18, 13, 13, 15, 4, 7}

The range is .

(Type a whole number.)

The mean is .

(Type an integer or decimal rounded to three decimal places as needed.)

The standard deviation is .

(Round the final answer to two decimal places as needed. Round all intermediate values to three decimal places as needed.)

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Book: Pirnot: Mathematics All Around,
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40. Find the range, mean, and standard deviation of the data set.

{11, 11, 11, 11, 11, 11, 11, 11}

The range is .

(Type a whole number.)

The mean is .

(Type an integer or decimal rounded to three decimal places as needed.)

The standard deviation is .

(Round the final answer to two decimal places as needed. Round all intermediate values to three decimal places as needed.)

41. Find the mean and standard deviation of the frequency distribution.

x	f
2	3
3	3
4	2
5	1
6	2

The mean is approximately .

(Round your answer to two decimal places.)

What is the standard deviation?

- ☐ A. 1.4
☐ B. 1.5
☐ C. 1.3
☐ D. 0.8

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Book: Pirnot: Mathematics All Around,
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42. Find the mean and standard deviation of the frequency distribution.

x	f
2	3
3	4
4	4
5	2
6	1

The mean is approximately .

(Round your answer to two decimal places.)

What is the standard deviation?

- ☐ A. 1.5
- ☐ B. 1.1
- ☐ C. 1.2
- ☐ D. 1.3

43. The table shows the scores of 20 people who took a paramedics licensing test. Find the mean and standard deviation for these data.

Score	Frequency
73	6
74	1
77	4
83	4
85	4
88	1

The mean of the data is .

The standard deviation is approximately .

(Round to three decimal places as needed.)

Course: MAT1301-14A-2B16-S1
Book: Pimot: Mathematics All Around,
5e

44. The following table lists the income tax rates for several states. Find the range, mean, and standard deviation of the data set.

State	A	B	C	D	E	F	G	H
Income Tax Rate (%)	10.12	8.37	10.12	7.47	7.47	5.91	10.77	4.17

The range is %.

(Round to two decimal places as needed.)

The mean is %.

(Type an integer or decimal rounded to three decimal places as needed.)

The standard deviation is %.

(Round the final answer to two decimal places as needed. Round all intermediate values to three decimal places as needed.)

45. The table on the right gives the annual income for eight families, in thousands of dollars. Find the number of standard deviations family E's income is from the mean.
- | | | | | | | | | |
|--------|----|----|----|----|----|----|----|----|
| Family | A | B | C | D | E | F | G | H |
| Income | 49 | 48 | 50 | 51 | 53 | 51 | 54 | 52 |

How many standard deviations is family E's income from the mean?

(Round to three decimal places as needed.)

46. The averages in a class are 75, 80, 83, 71, 80, 70, 89, 89, 75, and 95. Suppose the professor assigns grades using the method shown below. Averages on the border are assigned the higher grade.

A: averages that are at least 1.5 standard deviations above the mean

B: averages that are between 0.5 standard deviations above the mean, and 1.5 standard deviations above the mean

C: averages that are between 0.5 standard deviations below the mean, and 0.5 standard deviations above the mean

D: averages that are between 1.5 standard deviations below the mean, and 0.5 standard deviations below the mean

F: averages that are more than 1.5 standard deviations below the mean

What grade does the person earning the 89 get?

The person will get a(n) .

Course: MAT1301-14A-2B10-S1
Book: Pimot: Mathematics All Around,
5e

47. Suppose for a given month, the mean daily closing price for stock A was 104.17 and the standard deviation was 10.9. For stock B, the mean daily closing price was 77.69 with a standard deviation of 7.8. Which stock was more volatile? Stocks with greater coefficients of variation are considered more volatile.

Which stock was more volatile?

- ☐ Stock A
☐ Stock B

48. Suppose for a given month, the mean daily closing price for stock A was 114.75 and the standard deviation was 11.8. For stock B, the mean daily closing price was 81.65 with a standard deviation of 7.8. Which stock was more volatile? Stocks with greater coefficients of variation are considered more volatile.

Which stock was more volatile?

- ☐ Stock B
☐ Stock A

Course: MAT1301-14A-2B16-S1
Book: Pimot: Mathematics All Around,
5e

49. The table to the right lists the monthly price (in dollars) of a pound of coffee and a gallon of gasoline over a 6 month period. Find the population standard deviation of each set of data.

Month	Coffee Price $\frac{\$}{\text{lb}}$	Gasoline Price $\frac{\$}{\text{gal}}$	
Jan.	5.24	3.21	
Feb.	5.05	3.93	
Mar.	4.06	3.12	
May	4.17	3.77	
Jun.	5.63	3.24	
Jul.	5.92	3.29	

Find the population standard deviation of coffee prices.

The population standard deviation of coffee prices is .
(Round to the nearest hundredth as needed.)

Find the population standard deviation of gasoline prices.

The population standard deviation of gasoline prices is .
(Round to the nearest hundredth as needed.)

50. The table below gives the annual income for six families, in thousands of dollars. Which family had the greatest improvement in annual income from year 1 to year 2 with respect to the other families?

Family	A	B	C	D	E	F
Income Year 1	53	54	52	51	50	55
Income Year 2	54	56	53	55	52	58

Family had the greatest improvement in income.