Name _____ Date _____ Class Key

Accelerated Algebra 1 Test #7 DATA DISTRIBUTIONS Review

Sections 14-1, 14-2, 14-3, 14-4, 15-1, 15-2

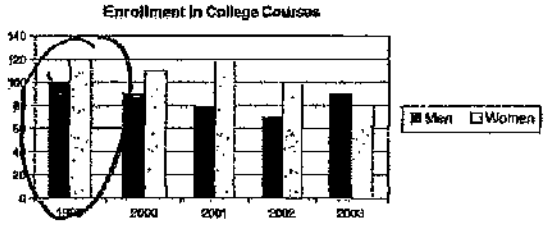
Select the best answer.

1. Which type of graph would best display the change in the number of student absences over the school year?

   A circle C bar
   B line D double-bar

over time

Use the double-bar graph for 2–3.



2. How many people were enrolled in college courses in 1999?

   F 100 H 200
   G 120 J 220

100 + 120

3. In what year was the difference between men's and women's enrollment the greatest?

   A 2000 C 2002
   B 2001 D 2003

120 − 80 = 40

Use the stem-and-leaf plot for 4–6.

7	2	2	2	3
8	0	5	8	
9	3	7		
10	0			

Key: 8|0 = 80

4. If you organized the data in a frequency table, which *could* be intervals?

   F 70–80 and 80–90
   G 70–79 and 80–84
   H 70–79 and 80–89
   J 70–80 and 81–90

5. What is the median?

   A 72 C 82.5
   B 80 D 83.2

6. What is the mean?

   F 72 H 82.5
   G 80 J 83.2

7. A group of men and women were polled about whether they go to the gym regularly. The joint and marginal relative frequencies corresponding to the results are shown in the two-way table.

	Yes	No	Total
Men	0.4	x	0.6
Women	0.3	y	0.4
Total	0.7	0.3	1

Which of these is the value of x?

   F 1 H 0.2
   G 0.5 J 0.1

8. Use the two-way table from Question 7. Which of these is the value of y?

   A 1 C 0.2
   B 0.5 D 0.1

9. For the set {1, 1, 2, 4, 5, 6, 7, 8, 10,} which would NOT be affected if another value of 10 was included?

   A range C median
   B mean D mode

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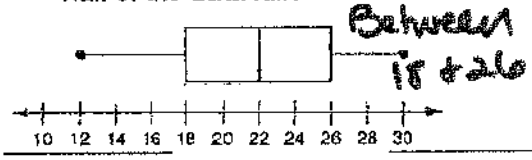
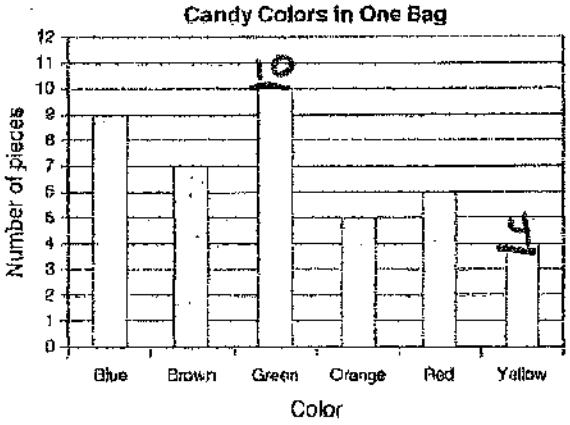
10. Look at the box-and-whisker plot below. Between what values does the middle half of the data fall?



11. Use this bar graph to identify how many more candies are green than yellow.



6 more

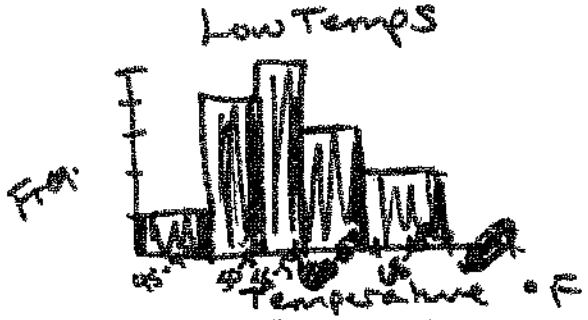
The low temperatures for Nashville, TN, for October 1–15, 2005, are given below. Use this data for questions 12–15.

Low Temperatures (°F)
56 68 67 62 64 60 52 52 54 56 58 54 56 56 49

12. Complete this frequency table.

Temperature (°F)	Frequency
45–49	1
50–54	4
55–59	5
60–64	3
65–69	2

13. Use your frequency table in question # 12 to make a histogram.



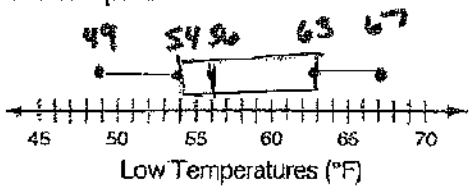
14. Find the mean, median, and mode.

mean: 57.4

median: 56

mode: 52, 55, 56, 54

15. Use the data to make a box-and-whisker plot.



16. Men and Women at a shoe store were polled to see if they prefer comfort or fashion. The results of the poll are shown in the two-way table.

	Comfort	Fashion
Men	20	3
Women	13	24

How many people were polled?

60 people

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17. Use the two-way table from Question 16. How many people prefer fashion?

27 people

18. Use the two-way table from Question 16. What is the probability that a man would choose comfort?

$\frac{.33}{.38} \approx .87 = 87\%$

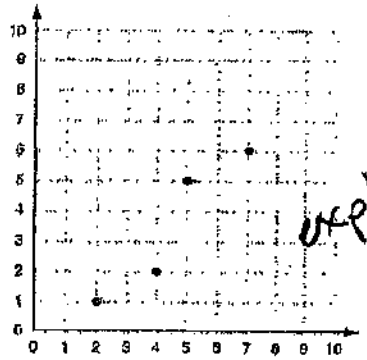
19. Use the two-way table from Question 16 to create a table to show the joint and marginal relative frequencies.

SHOE PREFERENCES

	COMFORT	FASHION	TOT.
MEN	.33	.05	.38
WOMEN	.22	.40	.62
TOTAL	.55	.45	1

20. Which ordered pairs match the scatter plot below?

D



explain

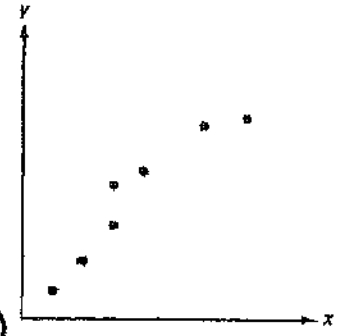
A (1, 2), (4, 2), (5, 5), (7, 6)

B (2, 1), (2, 4), (5, 5), (7, 6)

C (1, 2), (2, 4), (5, 5), (6, 7)

D (2, 1), (4, 2), (5, 5), (7, 6)

21. Which correlation best describes the scatter plot below?



F Positive

G Negative

H Continuous

J None

explain

22. Which of the following best describes a negative correlation?

A height of person over time

B depth of swimming pool as it drains over time

C number of drinks sold over the summer and air temperature

D number of groceries purchased and total amount of bill

explain

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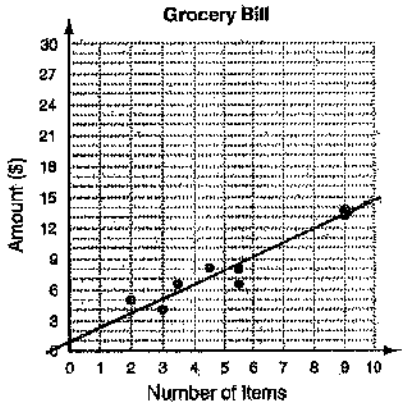
23. Based on the graph below, which is the best prediction for the cost of 9 items?

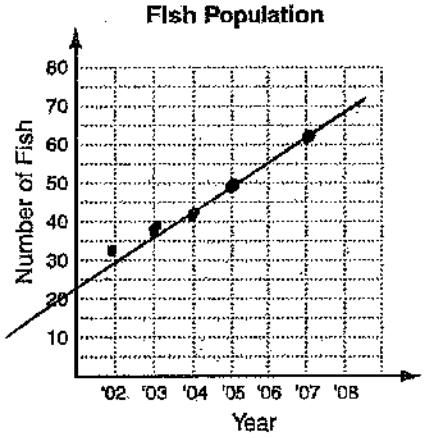


F about 8 H about 21

(G) about 14 J about 28

24. The table shows the number of fish in a small pond over four years. Draw a scatter plot and trend line.

Year	'02	'03	'04	'05
Number of Fish	32	37	41	50



Based on the trend line, predict how many fish will be in the pond in 2007.

~ 60 fish (something close)

25. Discuss causation and correlation in the following scenario. Test grade averages for this class increase as the number of hours playing video games increased by each student.

There is no direct relationship between video games & test. Therefore correlation does not imply causation.

Range = max − min

IQR = Q3 − Q1

Name: Key

For each set of data:

A) Find the measures of central tendency: **mean, median, mode**

B) Then find the measures of spread: **range, IQR, Standard Deviation, and MAD**

C) And then graph **a box and whiskers plot.**

1) 48, 23, 97, 36, 27, 72, 48, 41, 58

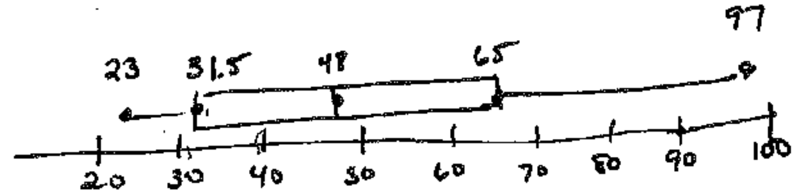
A) $\bar{x} = 50$ med = 48 mode = 48

B) Range = 74 $\sigma x = 21.9$ MAD = 17.1

IQR = 33.5

MAD #: 2, 27, 47, 14, 23, 22, 2, 9, 8

C) 23, 31.5, 48, 65, 97



2) 420, 360, 398, 196, 398, 400

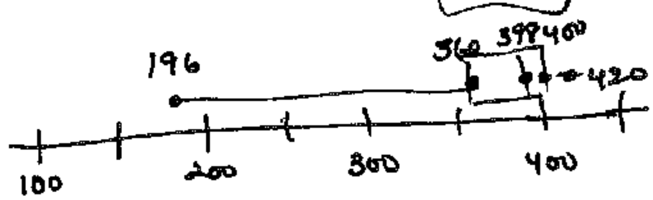
A) $\bar{x} = 362$ med = 398 mode − 398

B) Range = 224 $\sigma_x = 76.3$ MAD = 56

IQR = 40

MAD #: 58, 2, 36, 166, 36, 38

C) 196, 360, 398, 400, 420



3) 43, 57, 58, 47, 40, 50, 38, 52

A) $\bar{x} = 48.125$ MED = 48.5 mode − none

B) Range = 20 $\sigma x = 6.99$ MAD − 6.125

IQR = 13

MAD #: 5.125, 8.875, 9.875, 1.125, 8.125, 1.875, 10.125, 3.875

C) 38, 41.5, 48.5, 54.5, 58