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Summer Math Assignment:

As the school year has come to an end, we realize that you are looking forward to sunny days and relaxation. However, we also realize that students need to keep academic skills fresh for the next school year, and we want you to have a smooth transition in the fall. The math department has created a math summer assignment for you to complete before you enter the next grade. Students must show their work on white lined paper and return the assignment to their math teacher upon return to school. In the fall, the teachers will administer an assessment regarding the skills utilized to complete this assignment. The assessment will take place in September.

Have a safe and wonderful Summer! We look forward to seeing you in September!

Como el año escolar ha llegado a su fin, somos conscientes de que están deseando que lleguen los días soleados y de relajación. Sin embargo, también nos damos cuenta de que los estudiantes necesitan mantener las habilidades académicas frescas para el próximo año escolar, y queremos que usted tenga una facil transición en el otoño. El departamento de matemáticas ha creado una tarea de verano de matemáticas para que la completen antes de entrar al siguiente grado. Los estudiantes deben mostrar su trabajo en papel y devolver la tarea a su maestro de matemáticas al regresar a la escuela. En el otoño, los maestros administrarán una evaluación con respecto a las habilidades utilizadas para completar esta asignación. La evaluación de matemáticas se realizará en septiembre.

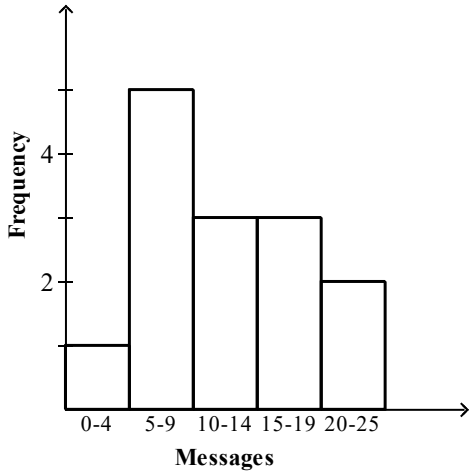
¡Que tengan un verano seguro y maravilloso! Esperamos verlos en septiembre.

Division of Elementary and Secondary Education

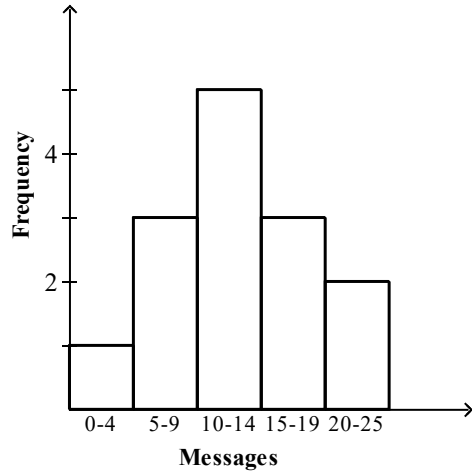
5. The data below shows the average number of text messages a group of students send per day. What is a histogram that represents the data?

20 5 8 22 10 1 7 15 16 12 15 6 13 8

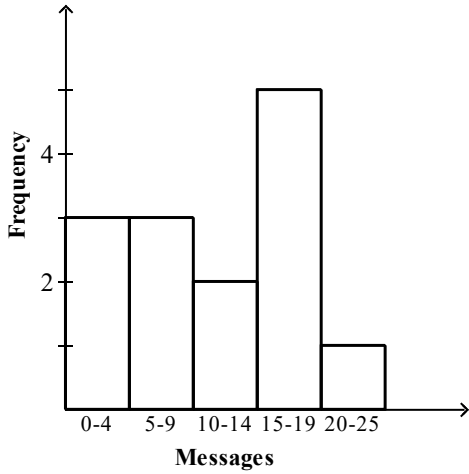
a.



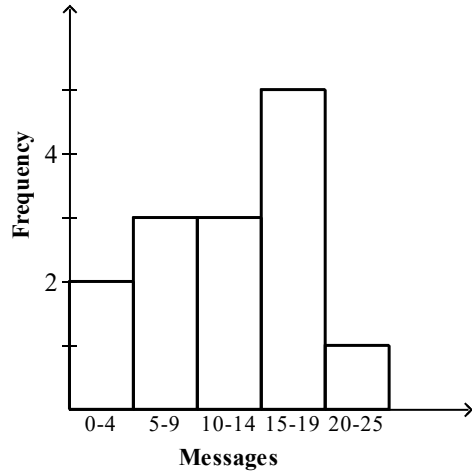
c.



b.

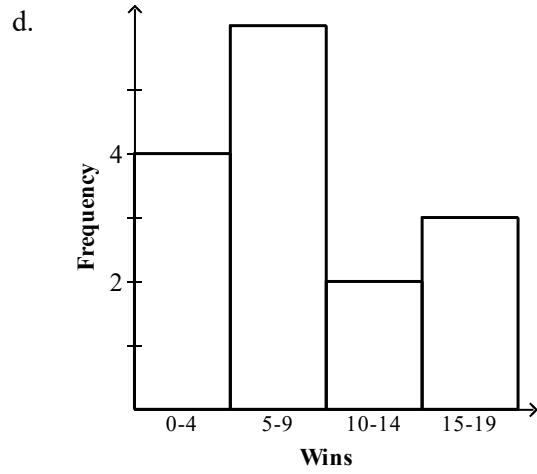
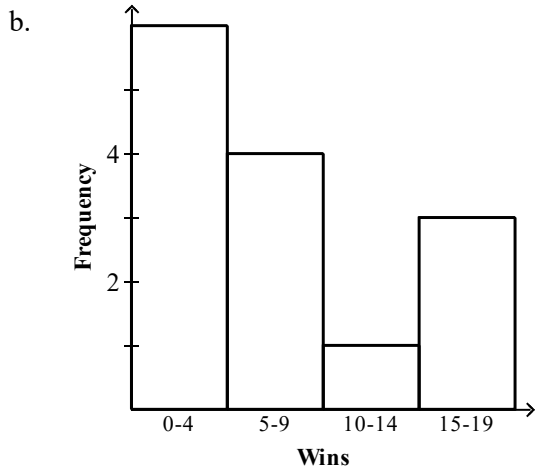
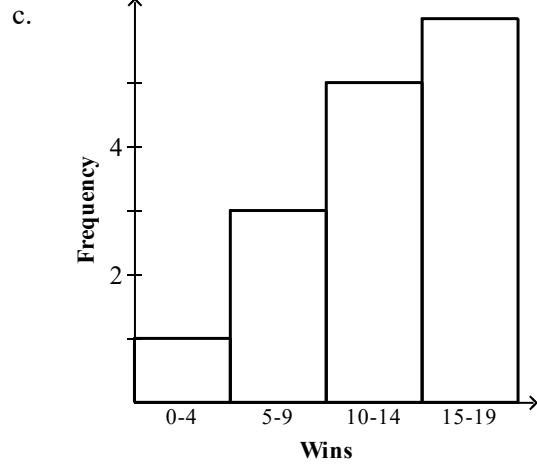
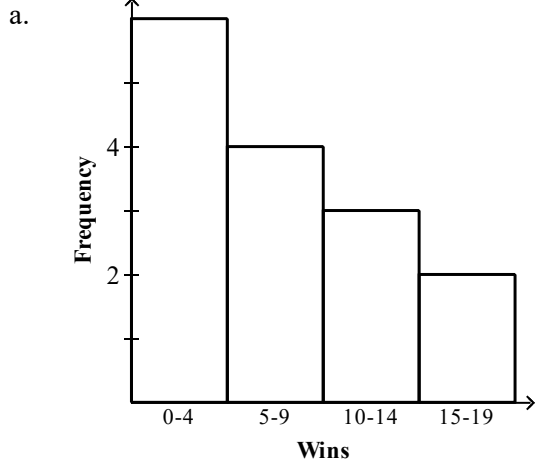


d.



6. The data below show the number of games won by a football team in each of the last 15 seasons. What is a histogram that represents the data?

3 4 8 12 7 2 1 15 16 6 10 13 4 1 5



7. The data below shows the number of kilowatt hours of electricity used by the tenants of a small apartment building in a given month. What is a cumulative frequency table that represents the data?

80 85 86 90 96 75 66 70
 99 65 70 99 70 73 64 92
 72 81 88 91 93 69 77 82

a.

Kilowatt Hours	Frequency	Cumulative Frequency
60 – 69	7	24
70 – 79	4	24
80 – 89	5	24
90 – 99	6	24

b.

Kilowatt Hours	Frequency	Cumulative Frequency
60 – 69	4	4
70 – 79	6	10
80 – 89	7	17
90 – 99	7	24

c.

Kilowatt Hours	Frequency	Cumulative Frequency
60 – 69	7	7
70 – 79	4	11
80 – 89	7	18
90 – 99	6	24

d.

Kilowatt Hours	Frequency	Cumulative Frequency
60 – 69	4	4
70 – 79	7	11
80 – 89	6	17
90 – 99	7	24

8. Suppose that to make the golf team you need to score no more than 81 on average over 5 games. If you scored 75, 74, 100, and 69 in your first 4 games what is the highest score you can shoot in your 5th game and still make the team?

a. 88

c. 87

- b. 85 d. 89

9. Find x if the average of 19, 15, 12, 12, and x is 18.

- a. 34 c. 30
b. 33 d. 32

10. The table shows the number of hours that a group of students spent studying for the SAT during their first week of preparation. The students each add 4 hours to their study times in the second week. What are the mean, median, mode, and range of times for the second week?

Student	Hours
Bob	19
James	10
Karen	15
Rosario	17
Antoine	10
Julio	16
Maria	13

- a. mean = 14
median = 19
mode = 18.3
range = 9
- b. mean = 18.3
median = 19
mode = 14
range = 9
- c. mean = 19
median = 18.3
mode = 14
range = 0.7
- d. mean = 18.3
median = 19
mode = 14
range = 0.7

11. The table shows the number of hours that a group of friends spent in their first week training to run a marathon. In the second week, they each add 5 hours to their training times. What are the mean, median, mode, and range of times for the second week?

Runner	Hours
Jeff	9
Mark	5
Karen	5
Costas	5
Brett	7
Nikki	6
Jack	7

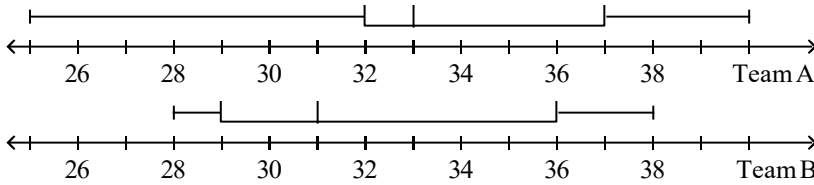
- a. mean = 10
median = 11
mode = 11.3
range = 4
- b. mean = 11
median = 11.3
mode = 10
range = 0.3
- c. mean = 11.3
median = 11
mode = 10
range = 4
- d. mean = 11.3
median = 11
mode = 10
range = 0.3

12. The salaries of seven employees of a small company are \$41,000, \$50,000, \$42,500, \$35,000, \$50,000, \$44,000, and \$48,500. Each of the employees receives a 4% raise. What are the mean, median, mode, and range of their new salaries?
- | | |
|---|---|
| a. mean = 46,205.71
median = 45,760
mode = 52,000
range = 15,600 | c. mean = 52,000
median = 45,760
mode = 46,205.71
range = 15,600 |
| b. mean = 45,760
median = 46,205.71
mode = 52,000
range = 445.71 | d. mean = 46,205.71
median = 45,760
mode = 52,000
range = 445.71 |

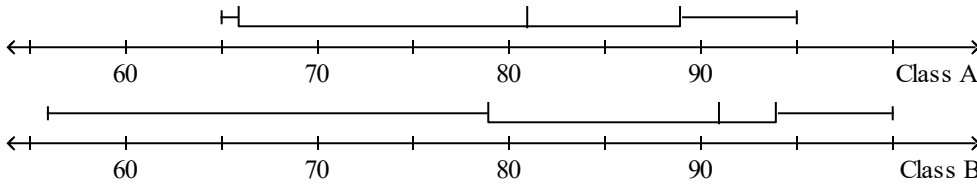
What are the minimum, first quartile, median, third quartile, and maximum of the data set?

13. 18, 20, 11, 10, 8, 6, 12, 4
- minimum 4; first quartile 7; median 10.5; third quartile 17.5; maximum 20
 - minimum 4; first quartile 5.5; median 12.75; third quartile 15; maximum 20
 - minimum 4; first quartile 8.75; median 12.75; third quartile 17.5; maximum 20
 - minimum 4; first quartile 7; median 10.5; third quartile 15; maximum 20

14. The two box-and-whisker plots below show the times in seconds for two teams in a 100 m dash. What do the interquartile ranges tell you about the two teams?



- Team A has more consistent times
 - Team B has more consistent times
 - Overall team A is faster than team B
 - Overall team B is faster than team A
15. The two box-and-whisker plots below show the scores on a math exam for two classes. What do the interquartile ranges tell you about the two classes?



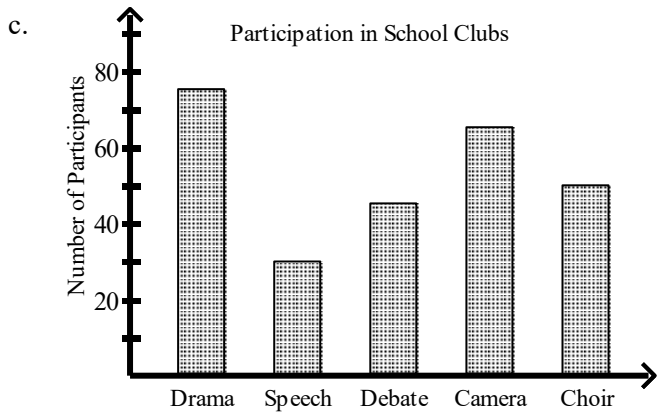
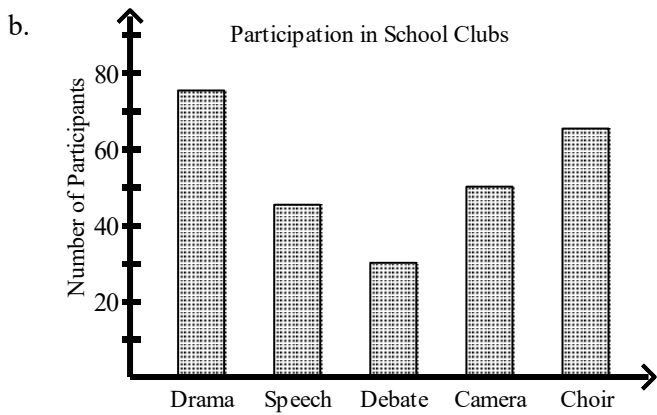
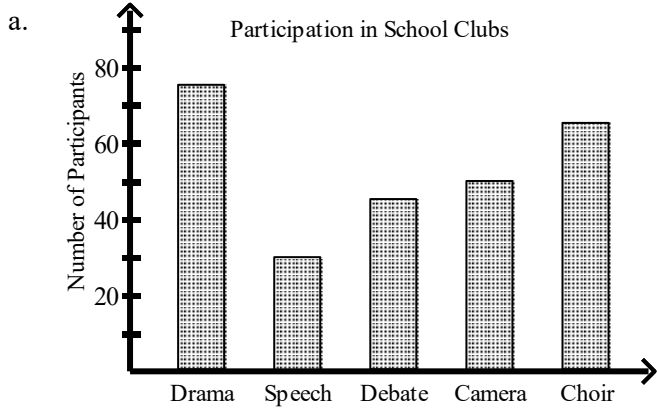
- Class A has more consistent scores
- Class B has more consistent scores
- Overall class A performed better than class B
- Overall class B performed better than class A

Is each data set qualitative or quantitative?

16. favorite sports teams
- qualitative
 - quantitative

29. Which of the following bar graphs shows the number of participants in various school clubs as listed below?

Drama	Speech	Debate	Camera	Choir
75	30	45	50	65



d. none of these

30. Which data set has mode 10?

a. 14, 2, 37, 14, 10, 28

b. 12, 7, 11, 29, 10, 12

c. 5, 10, 33, 33, 10, 10

d. 4, 18, 11, 17, 10, 11

31. Which data set has median 47?

- a. 32, -3, 19, 8, 22
- b. 37, 51, 55, 47, 27

- c. 39, 30, 15, 21, 43
- d. 14, 19, 3, -7, 27

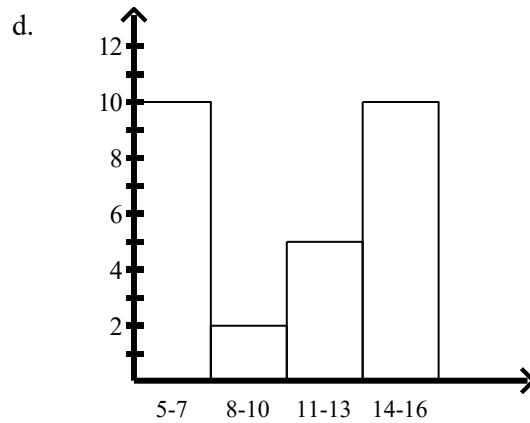
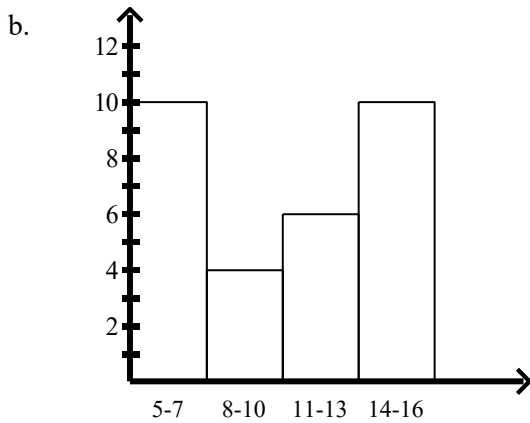
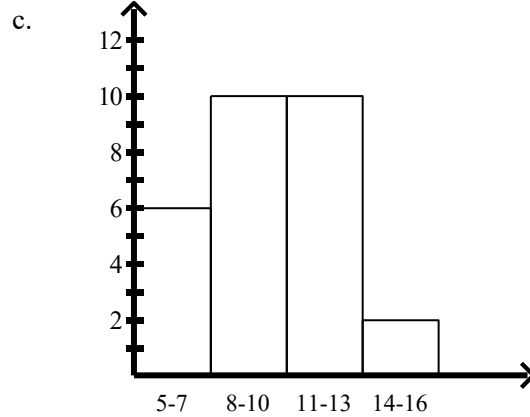
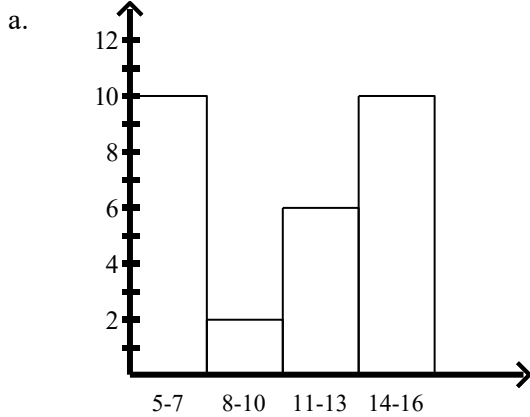
32. Which data set has mean 6.92?

- a. 5.1, 8.3, 4.1, 6.4, 9.5
- b. 5.4, 7.7, 9.3, 4.2, 7.1

- c. 9.4, 8.1, 4.5, 6.6, 9.6
- d. 6.1, 7.5, 7.3, 8.8, 4.9

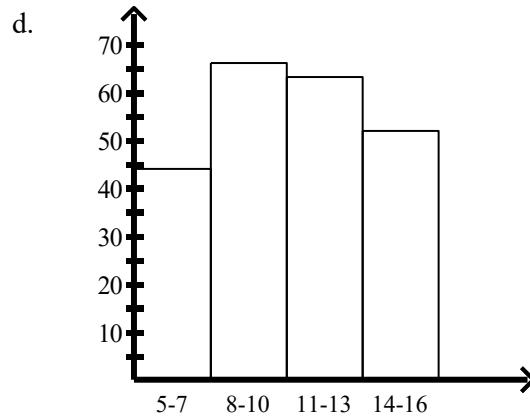
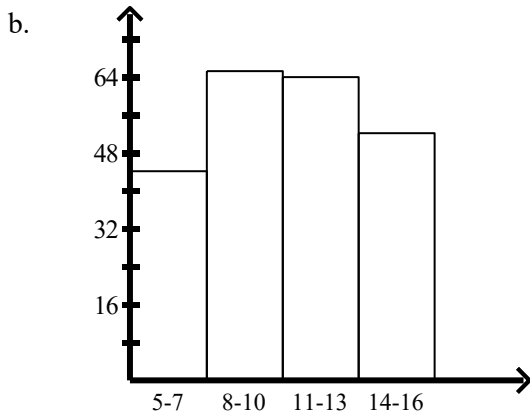
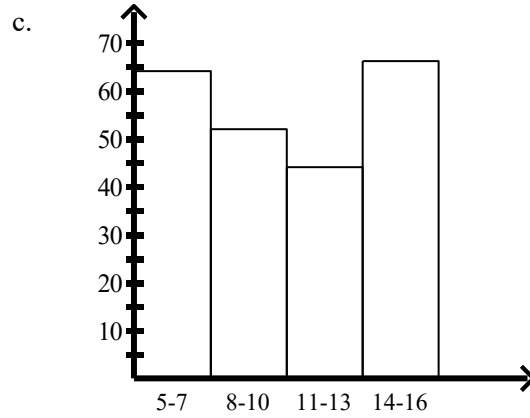
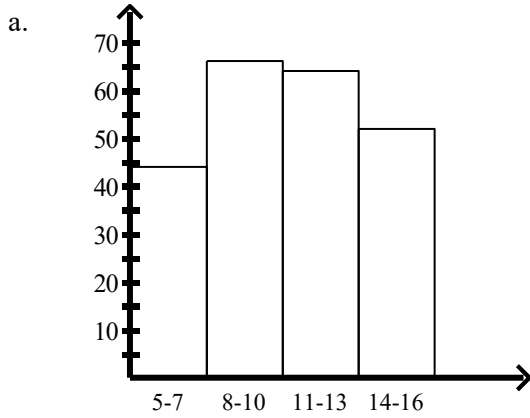
33. Which histogram uses the data in the table below?

Class Interval	Frequency
5-7	10
8-10	2
11-13	6
14-16	10



34. Which histogram uses the data in the table below?

Class Interval	Frequency
5-7	44
8-10	66
11-13	64
14-16	52



What is the expression in simplest form.

35. $\frac{-2x - 10}{x + 5}$

- a. 2
b. 5

- c. -2
d. -5

36. $\frac{\alpha + 2}{8\alpha + 16}$

- a. $\frac{1}{8}$
b. 8

- c. -8
d. $-\frac{1}{8}$

Perform the indicated operation.

___ 37. $\frac{5x}{13} - \frac{7x}{13}$

a. $\frac{12x}{13}$

b. $\frac{35x}{13}$

c. $\frac{2x}{13}$

d. $\frac{35x}{13}$

___ 38. $\frac{14}{5x} + \frac{14}{6x}$

a. $\frac{14}{11x}$

b. $\frac{28}{11x}$

c. $\frac{14}{15x}$

d. $\frac{77}{15x}$

___ 39. $\frac{8x}{3} \cdot \frac{7x}{4}$

a. $\frac{14x^2}{3}$

b. $\frac{53x^2}{12}$

c. $\frac{53x}{12}$

d. $\frac{14x}{3}$

___ 40. $\frac{5x}{7} \div \frac{2x}{6}$

a. $\frac{5x^2}{21}$

b. $\frac{15x^2}{7}$

c. $\frac{22x}{21}$

d. $\frac{15}{7}$

