

### Content and Language Objective:

Students will review the ideas behind finding statistical data and be able to explain the meanings behind each piece of statistical data.

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### Warm - Up

When you hear the words statistical data what comes to your mind?

basketball

range

votes

real-world data

graphs & tables

business

mean, median, mode

Quartiles

# Mean

The mean is the average of a set of numbers.

To find the mean add all of the numbers and divide the sum by the number of addends.

$$\bar{x} = x \text{ bar} = \text{mean}$$

# Mean

To find the mean add all of the numbers and divide the sum by the number of addends.

**20, 23, 21, 20, 21**

addends {  
20  
23  
21  
20  
+21

**105** ← Sum

$$\begin{array}{ccc} \text{Sum} & \text{addends} & \\ 105 \div 5 = & 21 & \text{mean} \end{array}$$

# Mean

To find the mean add all of the numbers and divide the sum by the number of addends.

12, 15, 10, 13, 12, 11, 11

A 35  
B 84  
C 94

12  
15  
10  
13  
12  
11  
+11  
84

$$84 \div 7 = 12$$

A 12  
B 5  
C 84

# Mean

To find the mean add all of the numbers and divide the sum by the number of addends.

**70, 52, 66, 88**

A 264

70

B 364

52

C 276

66

+88

÷ =

A 5

B 4

C 3

A 68

B 68.5

C 69

# Mean

To find the mean add all of the numbers and divide the sum by the number of addends.

80, 71, 68, 60, 72, 71, 61

A 483

B 482

C 492

80

71

68

60

72

71

+61

483

$$483 \div 7 = 69$$

A 5

B 6

C 7

A  $68\frac{6}{7}$

B 68.5

C 69



# Mean

To find the mean add all of the numbers and divide the sum by the number of addends.

85, 94, 100, 88, 100, 95, 100, 82

A 844

B 644

C 744

85

94

100

88

100

95

100

+82

$$\text{[ ]} \div \text{[ ]} = \text{[ ]}$$

A 7

B 8

C 9

A 92

B 92.5

C 93

# Range

The range is the difference between the greatest and least numbers of a set of data.

$$\begin{array}{l} \text{LN} - \text{SN} \\ \text{Max} - \text{Min} \end{array}$$

To find the range subtract the smallest number from the largest number.



# Range

To find the range subtract the smallest number from the largest number.

20, 23, 21, 20, 21

$$\begin{array}{r} 23 \\ -20 \\ \hline 3 \end{array}$$

# Range

To find the range subtract the smallest number from the largest number.

12, 15, 10, 13, 12, 11, 11

$$\begin{array}{r} 15 \\ -10 \\ \hline \end{array}$$

A 5

B 25

C 4

# Range

To find the range subtract the smallest number from the largest number.

**70, 52, 66, 88**

**A** 140

**B** 36

**C** 26

$$\begin{array}{r} 88 \\ -52 \\ \hline 36 \end{array}$$



# Range

To find the range subtract the smallest number from the largest number.

80, 71, 68, 60, 72, 71, 61

A 20

B 30

C 140

80

-60



Find the mean and the range of the data set.

**85, 94, 100, 88, 100, 95, 100, 82**

$$\text{mean} = 744 \div 8 = 93$$

$$\text{Range} = 100 - 82 = 18$$

# Mean

- |                                 |        |
|---------------------------------|--------|
| 1. $80 + 100 + 90 + 95 + 100$   | A. 53  |
| 2. $52 + 56 + 51$               | B. 190 |
| 3. $85 + 80 + 95 + 95 + 100$    | C. 410 |
| 4. $782 + 276 + 172$            | D. 91  |
| 5. $125 + 248 + 214 + 173$      | E. 93  |
| 6. $81 + 82 + 91 + 78$          | F. 55  |
| 7. $40 + 60 + 75 + 45$          | G. 83  |
| 8. $278 + 246$                  | H. 33  |
| 9. $75 + 100 + 100 + 70 + 100$  | I. 3   |
| 10. $0 + 0 + 0 + 0 + 15$        | J. 262 |
| 11. $21 + 34 + 44$              | K. 89  |
| 12. $437 + 509 + 864 + 274$     | L. 94  |
| 13. $80 + 80 + 100 + 95 + 95$   | M. 8   |
| 14. $4 + 6 + 7 + 12 + 11$       | N. 90  |
| 15. $75 + 100 + 100 + 100 + 95$ | O. 521 |



# Median

**The median is the middle number of a set of data when listed from least to greatest.**

**To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.**

# Median

To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.

**20, 23, 21, 20, 21**

~~20~~, ~~20~~, **21**, ~~21~~, ~~23~~

**21 is the median**

# Median

To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.

**12, 15, 10, 13, 12, 11, 11**

~~10~~, ~~11~~, ~~11~~, 12, ~~12~~, ~~13~~, ~~15~~

**A 12**

**B 11**

**C 13**

# Median

To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.

**70, 52, 66, 88**

$$\frac{66+70}{2}$$

$$\frac{136}{2} = 68$$

52, 66, 70, 88

A 70

B 66

C 68

# Median

To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.

**80, 71, 68, 60, 72, 71, 61**

60, 61, 68, 71, 71, 72, 80

A 60

B 71

C 68

# Median

To find the median list the numbers from least to greatest then cross out one from each end until the middle number is found. If two numbers are in the middle, find the mean of the two numbers.

85, 94, 100, 88, 100, 95, 100, 82

82, 85, 88, 94, 95, 100, 100, 100

A 94

B 95

C 94.5



# Mode

The mode is the number that appears most often. There may be more than one mode. There may be "no mode".

To find the mode, look for the number or numbers that you see the most.

# Mode

To find the mode, look for the number or numbers that you see the most.

23, 20, 23, 21, 20, 21

The Mode is 20 and 21.

# Mode

To find the mode, look for the number or numbers that you see the most.

12, 15, 10, 13, 12, 11, 11

A 12

B 11

C 11 & 12

# Mode

To find the mode, look for the number or numbers that you see the most.

**70, 52, 66, 88**

- ☐ A 52
- ☐ B 66
- ☒ C No Mode

# Mode

To find the mode, look for the number or numbers that you see the most.

80, 71, 68, 60, 72, 71, 61

☐ A 71

☐ B 60

☐ C No Mode

# Mode

To find the mode, look for the number or numbers that you see the most.

85, 94, 100, 88, 100, 95, 100, 82

☐ A 100

☐ B 100 & 88

☐ C No Mode



## Median, Mode & Range

1. 12, 15, 10, 13, 12

Range: ●

Mode: ●

Median: ●●

