

Mean, Median, and Mode Practice Problems

Key

1. The table below shows the total amount spent on groceries during a 12-week period.

\$72	\$126	\$84	\$113
\$113	\$142	\$126	\$126
\$97	\$111	\$108	\$95

Calculate the mean, median, and mode for these amounts.

Mean:

$$\frac{1313}{12} = \underline{\underline{\$109.42}}$$

Median:

stop here, past middle.

$$\begin{array}{cccccc|c} \underline{72} & \underline{84} & \underline{95} & \underline{97} & \underline{108} & \underline{111} & \underline{113} \\ & & & & & & \text{---} \end{array}$$

$$\frac{(111 + 113)}{2} = \underline{\underline{112}}$$

Mode:

\$126 (3 of them)

2. A high school must report its absence rate. The table below shows the percent of students absent from September to January.

Month	September	October	November	December	January
Absence rate	3.3%	8.0%	8.3%	7.8%	7.6%

3.3 7.6 7.8 8.0 8.3

Justify whether the school should use the mean or median to promote its low absence rate.

med 7.8%

mean $\frac{35}{5} = 7\%$ better!

Mean, Median, and Mode Practice Problems

3. The following data set represents the number of kids that visited Maggie's house on Halloween over the past seven years.

Year	Number of kids
2013	13
2014	11
2015	8
2016	19
2017	87
2018	21
2019	10

8 10 11 13 19 21 87

Explain why it would be better for Maggie to use the median rather than the mean to predict the number of kids next Halloween.

median is not impacted by the outlier (87)

4. Given the following information:

Median = 3

Mean = 4

Mode = 2

State 5 whole numbers that meet the criteria above, using the numbers 1 through 9.

_____ 3 _____

wow! Can you solve this?

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5. The table below shows the number of text messages that Sajaad sent over the last few days.

Monday	Tuesday	Wednesday	Thursday	Friday
20	48	31	67	?

The mean number of text messages sent by Sajaad is 44.

Calculate the number of text messages he sent on Friday.

$$44 \times 5 = 220$$

$$- 20$$

$$- 48$$

$$- 31$$

$$- 67$$

54 messages on Friday!

6. A group of 20 students fundraised a total of \$3000 for a local charity.

- a) Calculate the mean amount of money fundraised by each student.

$$3000 \div 20 = \underline{\underline{\$150}}$$

- b) The median amount raised by the group is \$120. Explain why eliminating the highest and the lowest amounts fundraised will not affect the median amount.

equal number of low and high removed. Middle stays the same.

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7. A store sells shoes with sizes ranging from 7 to 12. The following table shows sales for the last month.

Size	Quantity Sold
7	5
8	20
9	25
10	43
11	5
12	2

Choose the letter that best completes the sentence below:

The measure of central tendency that represents the most popular shoe size is:

- a) mean
- b) median
- c) mode
- d) weighted mean

size 10 is the most sold.

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8. Sidi works as a sales clerk at Cycle Sports. During the first 12 days of the month, the store sold the following numbers of bikes:

16	32	27	19
19	23	19	32
25	20	35	33

16 19 19 19 20 23 | 25 27 32 32 33 35

Calculate the median and the mode of this data.

Median: $(23 + 25) \div 2 = \underline{\underline{24}}$

Mode: 19

9. Doug is a welder who is looking for employment. Hourly rates for available jobs are shown in the table below:

\$22.50	\$29.50	\$18.50	\$26.75	\$26.75	\$17.59	\$26.75
\$26.75	\$28.25	\$17.50	\$24.25	\$18.50	\$24.00	\$26.75

- a) State the mean hourly rate.

$\frac{334.34}{14} = \$23.88$

- b) State the mode of the hourly rate.

\$26.75 5 of them

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10. Mackenzie weighs herself every week for 10 weeks. The following are her weights in pounds:

125 122 124 126 128 130 129 131 130 130

- a) State the mean to one decimal place. *2 dec*

$$\frac{1275}{10} = \underline{\underline{127.50}} = \underline{\underline{127.5}} \quad \text{1 dec}$$

- b) State the mode.

130

- c) State the median to one decimal place.

122 124 125 126 128 | 129 130 130 130 131
128.5

11. The following set of data represents the number of homeruns hit by 9 players on a baseball team:

62	14	25	7	48	31	14	47	4
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State the mean, median, and mode.

4 7 14 14 25 31 47 48 62
mode median

$$\text{Mean} = \frac{252}{9} = \underline{\underline{28}} \text{ homeruns}$$