

Mean, Median and Mode

1 Fill in the blank.

The median is the _____ of an ordered data set.

2 Fill in the blank.

The mean is another term for the _____ value of a data set.

3 Fill in the blanks.

To calculate the mean, _____ all the numbers in the data set and then _____ the total by the number of members in the data set.

4 True or False?

If no values are repeated, then a data set doesn't have a mode.

True False

5 Calculate the mean of this data set.

{ 8, 3, 5, 12 }

6 Find the median of this data set.

{ 0, 3, 4, 8, 10, 15, 20 }

7 Find the Mean, Median and Mode of this data set:

{ 7, 2, 5, 8, 14, 8, 10, 2 }

8 This table records how many miles Rob walked each weekday. Find the Mean, Median and Mode of this data set.

Day	Miles
Mon.	2.6
Tue.	0.0
Wed.	0.8
Thu.	2.1
Fri.	1.5

Mean _____ Median _____ Mode _____

Mean _____ Median _____ Mode _____

Mean, Median and Mode

1 Fill in the blank.

The median is the middle of an ordered data set.

2 Fill in the blank.

The mean is another term for the average value of a data set.

3 Fill in the blanks.

To calculate the mean, add all the numbers in the data set and then divide the total by the number of members in the data set.

4 True or False?

If no values are repeated, then a data set doesn't have a mode.

True False

5 Calculate the mean of this data set.

{ 8, 3, 5, 12 }

add: $8 + 3 + 5 + 12 = 28$

divide: $28 \div 4 = 7$

6 Find the median of this data set.

{ 0, 3, 4, 8, 10, 15, 20 }

8 is the median because the set is in order and it's the middle member.

7 Find the Mean, Median and Mode of this data set:

{ 7, 2, 5, 8, 14, 8, 10, 2 }

Mean:

$$\begin{array}{r} 3 \\ 14 \\ 10 \\ 8 \\ 8 \\ 7 \\ 5 \\ 2 \\ 2 \\ + 2 \\ \hline 56 \end{array}$$

$$\begin{array}{r} 7 \\ 8 \overline{)56} \\ \underline{-56} \\ 0 \end{array}$$

Since the set has an even number of members, the Median is the Mean of the middle two:

Median: { 2, 2, 5, 7, 8, 8, 10, 14 } $\frac{7+8}{2} = 7.5$

Mode: { 2, 2, 5, 7, 8, 8, 10, 14 }

Mean 7 Median 7.5 Mode 2 and 8

8 This table records how many miles Rob walked each weekday. Find the Mean, Median and Mode of this data set.

Day	Miles
Mon.	2.6
Tue.	0.0
Wed.	0.8
Thu.	2.1
Fri.	1.5

Mean:

$$\begin{array}{r} 2 \\ 2.6 \\ 2.1 \\ 1.5 \\ 0.8 \\ + 0.0 \\ \hline 7.0 \end{array}$$

$$\begin{array}{r} 1.4 \\ 5 \overline{)7.0} \\ \underline{-5} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

Median:
in order 0.0, 0.8, 1.5, 2.1, 2.6

Mode: None of the values are repeated in this set, so there is no mode.

Mean 1.4 Median 1.5 Mode none

Finding the Mean (or Average) - Set 1

A-MMM 1

Instructions: Find the Mean (or Average) of each set of numbers below. (Note: the numbers are inside curly-brackets { } to show that they form a set.)

1 {2, 3, 7}

First add all
the numbers.

$$\begin{array}{r} 2 \\ 3 \\ + 7 \\ \hline 12 \end{array}$$

Then divide the total by how
many numbers were added.

$$\begin{array}{r} \textcircled{4} \\ 3 \overline{)12} \\ \underline{-12} \\ 0 \end{array}$$

2 {6, 1, 2}

3 {8, 10}

4 {2, 4, 6, 8}

5 {5, 5, 8}

6 {20, 12}

7 {0, 1, 5, 10}

8 {1, 1, 2, 3, 8}

Finding the Mean (or Average) - Set 2

A-MMM 2

Instructions: Find the Mean (or Average) of each set of numbers below. You can use a calculator to do the addition and division for these problems if you want to.



1 {5, 0, 4, 10}

2 {1, 2}

$$\begin{array}{r} 10 \\ 5 \\ 4 \\ + 0 \\ \hline 19 \end{array} \quad \begin{array}{r} 4 \overline{)19} \\ \underline{4} \\ 19 \end{array} \quad 4.75$$

3 {15, 8, 19}

4 {5, 7, 7, 10}

5 {14, 15}

6 {3, 12, 9, 16, 10}

7 {9, 4, 11, 14}

8 {2, 20}

Finding the Median - Set 1

A-MMM 3

Instructions: Find the Median of each set below. Remember, the members must be in order and if there's an even number of members, the Median is the Mean of the middle two members.

1 {5, 1, 0, 3, 8} *odd*

First make sure the set is in order.

$$\{0, 1, \textcircled{3}, 5, 8\}$$

Then choose the middle member.

2 {6, 2, 7, 1} *even*

First make sure the set is in order.

$$\{1, \textcircled{2}, \textcircled{6}, 7\}$$

The Median is the Mean of the middle two.

$$\text{Median} = \frac{2 + 6}{2} = \textcircled{4}$$

3 {12, 9, 10}

4 {6, 1, 10, 7, 4, 2}

5 {1, 2, 3, 4, 5, 6, 7}

6 {1, 2, 3, 4, 5, 6}

7 {4, 0, 2, 0, 2, 1, 3}

8 {0, 1, 2, 2, 5, 8}

Finding the Median - Set 2

A-MMM 4

Instructions: Find the Median of each set below. Remember, the members must be in order and if there's an even number of members, the Median is the Mean of the middle two members.

1 {7, 0, 2.5, 4, 15}

2 {25, 22, 21, 23, 24}

First make sure the set is in order.

{0, 2.5, 4, 7, 15}

Then choose the middle member.

3 {30, 31}

4 {80, 20, 70, 30}

5 {1, 1, 4, 5, 2, 1, 2, 3, 5}

6 {20, 500, 100}

7 {2.5, 1.5, 6.0, 1.1}

8 {0, 1, 0}

Finding the Mode

A-MMM 5

Instructions: Find the Mode of each set below. Remember, there may not be a Mode, or there may be more than one Mode. (Note: You can re-order the sets to make finding the Mode easier.)

1 {5, 2, 1, 5, 7, 3, 4, 6}

{1, 2, 3, 4, 5, 5, 6, 7}

↑
The Mode is 5 because it is repeated most often.

2 {8, 0, 0, 2, 4, 8, 10}

{0, 0, 2, 4, 8, 8, 10}

↑ ↑
Both 0 and 8 are Modes

3 {5, 1, 2, 5, 1, 5, 5}

4 {15, 5, 30, 60, 25}

5 {0, 1, 5, 1, 8, 3, 3, 9}

6 {0, 0, 1, 1, 2, 2, 3, 3}

7 {12, 10, 15, 12, 18}

8 {7, 9, 7, 4, 4, 3, 3, 4}

9 {1, 0, 1, 0, 1, 0}

10 {0, 1, 2, 3, 3, 3, 4, 4, 4}

Mean, Median and Mode - Mixed Practice Set 1

Instructions: Try to remember which is which! :)

1 Find the Median of this set:
{4, 10, 19, 20, 30, 42, 50}

2 Find the Mean of this set:
{20, 15, 30, 35}

3 Find the Mode of this set:
{7, 8, 8, 9, 8, 9, 7, 6}

4 Find the Mean of this set:
{100, 200}

5 Find the Median of this set:
{5, 1.7, 22, 9, 30.5}

6 Find the Mode of this set:
{6, 3, 4, 2, 8, 7, 5, 9, 2, 4}

7 Find the Mean of this set:
{0, 0, 1, 5, 9, }

8 Find the Median of this set:
{2, 4, 8, 10}

9 Find the Mode of this set:
{12, 5, 7, 3, 0, 1, 9}

10 Find the Mean of this set:
{1.5, 5.0, 2.5}

Mean, Median and Mode Word Problems

A-MMM 7

Instructions: Find the Mean, Median and Mode in each problem below. Please use a calculator for the computations.



- 1** A musician practiced piano for five days and recorded the time spent each day. Find the Mean, Median and Mode.

Practice Time (min.)				
30	15	30	20	45

Mean _____

Median _____

Mode _____

- 2** During a seven day winter storm, snow fall levels were recorded in this table. Find the mean, median and Mode.

Snow Fall (in.)						
2.5	1.2	0.0	3.9	1.0	2.5	1.5

Mean _____

Median _____

Mode _____

- 3** A Track and Field athlete was practicing Long Jump and recorded the following scores. Find the Mean, Median and Mode of the distances jumped.

Distances Jumped (m)					
7.10	6.85	7.25	7.35	6.90	6.85

Mean _____

Median _____

Mode _____

- 4** A gamer bought four video games and listed their prices in the table below. Find the Mean, Median and Mode of the price list.

Price of Each Game			
\$14.99	\$1.99	\$24.99	\$5.99

Mean _____

Median _____

Mode _____

Finding the Mean (or Average) - Set 1

A-MMM 1

Instructions: Find the Mean (or Average) of each set of numbers below. (Note: the numbers are inside curly-brackets { } to show that they form a set.)

1 {2, 3, 7}

First add all the numbers.

$$\begin{array}{r} 2 \\ 3 \\ + 7 \\ \hline 12 \end{array}$$

Then divide the total by how many numbers were added.

$$\begin{array}{r} \textcircled{4} \\ 3 \overline{)12} \\ \underline{-12} \\ 0 \end{array}$$

2 {6, 1, 2}

$$\begin{array}{r} 6 \\ 1 \\ + 2 \\ \hline 9 \end{array} \quad \begin{array}{r} \textcircled{3} \\ 3 \overline{)9} \\ \underline{-9} \\ 0 \end{array}$$

3 {8, 10}

$$\begin{array}{r} 10 \\ + 8 \\ \hline 18 \end{array} \quad \begin{array}{r} \textcircled{9} \\ 2 \overline{)18} \\ \underline{-18} \\ 0 \end{array}$$

4 {2, 4, 6, 8}

$$\begin{array}{r} 2 \\ 4 \\ 6 \\ + 8 \\ \hline 20 \end{array} \quad \begin{array}{r} \textcircled{5} \\ 4 \overline{)20} \\ \underline{-20} \\ 0 \end{array}$$

5 {5, 5, 8}

$$\begin{array}{r} 5 \\ 5 \\ + 8 \\ \hline 18 \end{array} \quad \begin{array}{r} \textcircled{6} \\ 3 \overline{)18} \\ \underline{-18} \\ 0 \end{array}$$

6 {20, 12}

$$\begin{array}{r} 20 \\ + 12 \\ \hline 32 \end{array} \quad \begin{array}{r} \textcircled{16} \\ 2 \overline{)32} \\ \underline{-32} \\ 0 \end{array}$$

7 {0, 1, 5, 10}

$$\begin{array}{r} 10 \\ 5 \\ 1 \\ + 0 \\ \hline 16 \end{array} \quad \begin{array}{r} \textcircled{4} \\ 4 \overline{)16} \\ \underline{-16} \\ 0 \end{array}$$

8 {1, 1, 2, 3, 8}

$$\begin{array}{r} 8 \\ 3 \\ 2 \\ 1 \\ + 1 \\ \hline 15 \end{array} \quad \begin{array}{r} \textcircled{3} \\ 5 \overline{)15} \\ \underline{-15} \\ 0 \end{array}$$

Finding the Mean (or Average) - Set 2

A-MMM 2

Instructions: Find the Mean (or Average) of each set of numbers below. You can use a calculator to do the addition and division for these problems if you want to.



1 {5, 0, 4, 10}

$$\begin{array}{r} 10 \\ 5 \\ 4 \\ + 0 \\ \hline 19 \end{array} \quad 4 \overline{)19} \quad 4.75$$

2 {1, 2}

$$\begin{array}{r} 2 \\ + 1 \\ \hline 3 \end{array} \quad 2 \overline{)3} \quad 1.5$$

3 {15, 8, 19}

$$\begin{array}{r} 19 \\ 15 \\ + 8 \\ \hline 42 \end{array} \quad 3 \overline{)42} \quad 14$$

4 {5, 7, 7, 10}

$$\begin{array}{r} 10 \\ 7 \\ 7 \\ + 5 \\ \hline 29 \end{array} \quad 4 \overline{)29} \quad 7.25$$

5 {14, 15}

$$\begin{array}{r} 15 \\ + 14 \\ \hline 29 \end{array} \quad 2 \overline{)29} \quad 14.5$$

6 {3, 12, 9, 16, 10}

$$\begin{array}{r} 16 \\ 12 \\ 10 \\ 9 \\ + 3 \\ \hline 50 \end{array} \quad 5 \overline{)50} \quad 10$$

7 {9, 4, 11, 14}

$$\begin{array}{r} 14 \\ 11 \\ 9 \\ + 4 \\ \hline 38 \end{array} \quad 4 \overline{)38} \quad 9.5$$

8 {2, 20}

$$\begin{array}{r} 20 \\ + 2 \\ \hline 22 \end{array} \quad 2 \overline{)22} \quad 11$$

Finding the Median - Set 1

A-MMM 3

Instructions: Find the Median of each set below. Remember, the members must be in order and if there's an even number of members, the Median is the Mean of the middle two members.

1 {5, 1, 0, 3, 8} *odd*

First make sure the set is in order.

$$\{0, 1, \textcircled{3}, 5, 8\}$$

Then choose the middle member.

2 {6, 2, 7, 1} *even*

First make sure the set is in order.

$$\{1, \textcircled{2}, \textcircled{6}, 7\}$$

The Median is the Mean of the middle two.

$$\text{Median} = \frac{2 + 6}{2} = \textcircled{4}$$

3 {12, 9, 10}

$$\{9, \textcircled{10}, 12\}$$

Median

4 {6, 1, 10, 7, 4, 2}

$$\{1, 2, \textcircled{4}, \textcircled{6}, 7, 10\}$$

$$\text{Median} = \frac{4 + 6}{2} = \textcircled{5}$$

5 {1, 2, 3, 4, 5, 6, 7}

$$\{1, 2, 3, \textcircled{4}, 5, 6, 7\}$$

Median

6 {1, 2, 3, 4, 5, 6}

$$\{1, 2, \textcircled{3}, \textcircled{4}, 5, 6\}$$

$$\text{Median} = \frac{3 + 4}{2} = \textcircled{3.5} \text{ or } 3\frac{1}{2}$$

7 {4, 0, 2, 0, 2, 1, 3}

$$\{0, 0, 1, \textcircled{2}, 2, 3, 4\}$$

Median

8 {0, 1, 2, 2, 5, 8}

$$\{0, 1, \textcircled{2}, \textcircled{2}, 5, 8\}$$

$$\text{Median} = \frac{2 + 2}{2} = \textcircled{2}$$

Finding the Median - Set 2

A-MMM 4

Instructions: Find the Median of each set below. Remember, the members must be in order and if there's an even number of members, the Median is the Mean of the middle two members.

1 {7, 0, 2.5, 4, 15}

First make sure the set is in order.

{0, 2.5, 4, 7, 15}

Then choose the middle member.

2 {25, 22, 21, 23, 24}

{21, 22, 23, 24, 25}

↑
Median

3 {30, 31}

{30, 31}

Median = $\frac{30 + 31}{2} = 30.5$

4 {80, 20, 70, 30}

{20, 30, 70, 80}

Median = $\frac{30 + 70}{2} = 50$

5 {1, 1, 4, 5, 2, 1, 2, 3, 5}

{1, 1, 1, 2, 2, 3, 4, 5, 5}

↑
Median

6 {20, 500, 100}

{20, 100, 500}

↑
Median

7 {2.5, 1.5, 6.0, 1.1}

{1.1, 1.5, 2.5, 6.0}

Median = $\frac{1.5 + 2.5}{2} = 2$

8 {0, 1, 0}

{0, 0, 1}

↑
Median

Finding the Mode

A-MMM 5

Instructions: Find the Mode of each set below. Remember, there may not be a Mode, or there may be more than one Mode. (Note: You can re-order the sets to make finding the Mode easier.)

1 {5, 2, 1, 5, 7, 3, 4, 6}

{1, 2, 3, 4, 5, 5, 6, 7}

↑
The Mode is 5 because it is repeated most often.

2 {8, 0, 0, 2, 4, 8, 10}

{0, 0, 2, 4, 8, 8, 10}

↑ ↑
Both 0 and 8 are Modes

3 {5, 1, 2, 5, 1, 5, 5}

{1, 1, 2, 5, 5, 5, 5}

↑
The Mode is 5

4 {15, 5, 30, 60, 25}

{5, 15, 25, 30, 60}

No Mode

5 {0, 1, 5, 1, 8, 3, 3, 9}

{0, 1, 1, 3, 3, 5, 8, 9}

↑ ↑
Both 1 and 3 are Modes

6 {0, 0, 1, 1, 2, 2, 3, 3}

No Mode

(Because the Mode is not just a repeated number. It's the number that's repeated most often.)

7 {12, 10, 15, 12, 18}

{10, 12, 12, 15, 18}

↑
The Mode is 12

8 {7, 9, 7, 4, 4, 3, 3, 4}

{3, 3, 4, 4, 4, 7, 7, 9}

↑
The Mode is 4

9 {1, 0, 1, 0, 1, 0}

{0, 0, 0, 1, 1, 1}

No Mode

10 {0, 1, 2, 3, 3, 3, 4, 4, 4}

{0, 1, 2, 3, 3, 3, 4, 4, 4}

↑ ↑
Both 3 and 4 are Modes

Mean, Median and Mode - Mixed Practice Set 1

A-MMM 6

Instructions: Try to remember which is which! :)

- 1 Find the Median of this set:
{4, 10, 19, 20, 30, 42, 50}
- ↑
The Median is 20

- 2 Find the Mean of this set:
{20, 15, 30, 35}
- $$20 + 15 + 30 + 35 = 100$$
- $$100 \div 4 = 25$$

- 3 Find the Mode of this set:
{7, 8, 8, 9, 8, 9, 7, 6}
- { 6, 7, 7, 8, 8, 8, 9, 9 }
- ↑
The Mode is 8

- 4 Find the Mean of this set:
{100, 200}
- $$100 + 200 = 300$$
- $$300 \div 2 = 150$$

- 5 Find the Median of this set:
{5, 1.7, 22, 9, 30.5}
- { 1.7, 5, 9, 22, 30.5 }
- ↑
The Median is 9

- 6 Find the Mode of this set:
{6, 3, 4, 2, 8, 7, 5, 9, 2, 4}
- { 2, 2, 3, 4, 4, 5, 6, 7, 8, 9 }
- ↑ ↑
Both 2 and 4 are Modes

- 7 Find the Mean of this set:
{0, 0, 1, 5, 9, }
- $$0 + 0 + 1 + 5 + 9 = 15$$
- $$15 \div 5 = 3$$

- 8 Find the Median of this set:
{2, 4, 8, 10}
- ↑
Median = $\frac{4 + 8}{2} = 6$

- 9 Find the Mode of this set:
{12, 5, 7, 3, 0, 1, 9}
- No Mode

- 10 Find the Mean of this set:
{1.5, 5.0, 2.5}
- $$1.5 + 5.0 + 2.5 = 9$$
- $$9 \div 3 = 3$$

Mean, Median and Mode Word Problems

A-MMM 7

Instructions: Find the Mean, Median and Mode in each problem below. Please use a calculator for the computations.



- 1** A musician practiced piano for five days and recorded the time spent each day. Find the Mean, Median and Mode.

Practice Time (min.)				
30	15	30	20	45

Mean 28 min

$$30 + 15 + 30 + 20 + 45 = 140$$

$$\begin{array}{r} \textcircled{28} \\ 5 \overline{)140} \end{array}$$

Median 30 min

15, 20, 30, 30, 45

Mode 30 min

- 2** During a seven day winter storm, snow fall levels were recorded in this table. Find the mean, median and Mode.

Snow Fall (in.)						
2.5	1.2	0.0	3.9	1.0	2.5	1.5

Mean 1.8 in.

$$2.5 + 1.2 + 0.0 + 3.9 + 1.0 + 2.5 + 1.5 = 12.6$$

$$\begin{array}{r} \textcircled{1.8} \\ 7 \overline{)12.6} \end{array}$$

Median 1.5 in.

0.0, 1.0, 1.2, 1.5, 2.5, 2.5, 3.9

Mode 2.5 in

- 3** A Track and Field athlete was practicing Long Jump and recorded the following scores. Find the Mean, Median and Mode of the distances jumped.

Distances Jumped (m)					
7.10	6.85	7.25	7.35	6.90	6.85

Mean 7.05 m

$$\begin{array}{r} 7.10 \\ 6.85 \\ 7.25 \\ 7.35 \\ 6.90 \\ + 6.85 \\ \hline 42.30 \end{array} \quad \begin{array}{r} \textcircled{7.05} \\ 6 \overline{)42.3} \end{array}$$

Median 7.00 m

6.85, 6.85, 6.90, 7.10, 7.25, 7.35

$$\frac{6.90 + 7.10}{2} = \textcircled{7.00}$$

Mode 6.85 m

- 4** A gamer bought four video games and listed their prices in the table below. Find the Mean, Median and Mode of the price list.

Price of Each Game			
\$14.99	\$1.99	\$24.99	\$5.99

Mean \$11.99

$$\begin{array}{r} 24.99 \\ 14.99 \\ 5.99 \\ + 1.99 \\ \hline 47.96 \end{array} \quad \begin{array}{r} \textcircled{11.99} \\ 4 \overline{)47.96} \end{array}$$

Median \$10.49

1.99, 5.99, 14.99, 24.99

$$\frac{5.99 + 14.99}{2} = \textcircled{10.49}$$

Mode none