

V11	Odeno meda media mana	
Year 11	Mean, mode, median, range	

To find the average

Learning Objective	Worksheet Title
To find the average using mean, median, mode	Find the Median
and range	
	Find the Range
	Mean, median, mode, range problems 2
	Mean, median, mode, range sheet 5
	Problems

#### **More Practice:**

• Find your own data i.e. football results, and work out the mean, mode and median

#### Mean

### The average value

### How to find the Mean:

- 1. Add up all the numbers.
- Divide the sum by the number of values.

E.g. The mean of 3,2,10,5 is

$$\frac{3+2+10+5}{4} = \frac{20}{4} = 5$$

### Mode

## The most frequent number

### **Special Cases:**

- No Mode if all the numbers occur the same amount of times.
- More than one Mode if more than one number is the most frequent.

### Median

### The middle number

### How to find the Median:

- Put the numbers from smallest to largest.
- The number in the middle is the median. If there are two middle numbers, add them and divide by two.

### Range

# Difference between highest and lowest numbers

### How to find the Range:

- Put the numbers from smallest to largest.
- 2. Subtract the lowest value from the largest.

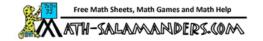
Name Date

# **\*\***

# FIND THE MEDIAN SHEET 1

Find the median of these data points. Odd number of data points.

Question	Order	Median
1) 16, 24, 8, 12, 19	8, 12, <u>16</u> , 19, 24	16
2) 13, 5, 2, 10, 8		
3) 4, 1, 1, 6, 5		
4) 15, 32, 53, 27, 11		
5) 89, 38, 94		
6) 75, 29, 12, 17, 15		
7) 73, 91, 56, 24, 14, 17, 10		
8) 67, 13, 121, 86, 55		
9) 142, 173, 129, 156, 181		
10) 257, 366, 305, 286, 182		
11) 362, 326, 263		
12) 82, 106, 91, 115, 78, 83, 102		
13) 873, 783, 837, 387, 738		
14) 428, 417, 472, 456, 409		
15) 3, 19, 26, 3, 8, 37, 12, 5, 0		
16) 819, 862, 851, 904, 786		



# **\*\***

## FIND THE RANGE SHEET 1

Find the range in each of the sets of data below by ordering the numbers and then finding the difference between the highest and lowest.

Data		Ordered list	Range
1)	45, 23, 17, 20, 27, 11	11, 17, 20, 23, 27, 45	45-11=34
2)	6, 23, 12, 19, 2, 7		
3)	19, 26, 23, 35, 29, 21		
4)	5, 2, 0, 8, 11, 16, 10		
5)	62, 78, 56, 61, 59, 83		
6)	73, 87, 65, 92, 89, 91		
7)	18, 6, 23, 2, 15, 21, 7		
8)	3, 16, 12, 18, 6, 4, 19, 4		
9)	25, 47, 32, 21, 58, 52, 39		
10)	0.3, 0.9, 0.4, 1.2, 0.5		
11)	2.3, 3.6, 1.4, 1.1, 3.7		
12)	6.2, 1.7, 5.1, 4.6, 1.3, 1.7		
13)	12.8, 5.4, 9, 2, 3.6, 9.7		
14)	26, 15, 74, 61, 19, 8, 53		
15)	0.9, 0.3, 0.4, 1.6, 0.7, 1.5		
16)	76, 23, 15, 92, 11, 37, 101		



Name Date

# MEAN, MEDIAN, MODE AND RANGE PROBLEMS 2



1) In a times table test, a group of 9 children score 25, 17, 21, 25, 23, 21, 27, 21 and 18 out of a total of 30. Find their mean, median, mode and range.

Mean Median Mode Range

2) The salamanders have a competition to see how far they can jump. Their results are as follows:

Captain Sally Quadra Tyger Frazer Quadra 2.3m 3.5m 1.7m 4.3m 2.1m 1.7m

Find the mean, median, mode and range of their jumps.

Mean Median Mode Range

3) On a day in January the temperatures for 7 places around the world are as follows:

Amsterdam 5°C Hong Kong 15°C Moscow -17°C Toronto -17°C

Cape Town 20°C Minneapolis -21°C New York -6°C

Find the mean, median, mode and range of temperatures.

Mean Median Mode Range



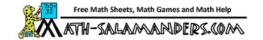
Name Date



# MEAN, MEDIAN, MODE AND RANGE SHEET 5

Find the mean, median, mode and range in each of the sets of data.

1)	61, 57, 49, 60, 45, 51, 57, 60, 53, 57, 55, 48, 65, 52									
order	45,									
	Mean	Median	Mode	Range						
2)	129, 113, 110, 123, 112, 115, 110, 124, 121, 113, 115, 121, 115									
order										
	Mean	Median	Mode	Range						
3)	14, 7, 4	, 8, 12, 4, 2, 9, 7, 1	11, 15, 12, 11, 11,	8, 11, 7						
order										
	Mean	Median	Mode	Range						
4)	83, 77, 81, 79, 85, 77, 76, 72, 87, 81, 83, 77, 91, 81, 77									
order										
	Mean	Median	Mode	Range						
5)			Mode .6, 0.2, 1.1, 0.3, 0.							
5) order										
-										
-	0.7, 0.2, 0 Mean	.9, 1.2, 1.5, 0.4, 0 Median	.6, 0.2, 1.1, 0.3, 0.	7, 0.2, 1.1 Range						
order	0.7, 0.2, 0 Mean	.9, 1.2, 1.5, 0.4, 0 Median	.6, 0.2, 1.1, 0.3, 0. Mode	7, 0.2, 1.1 Range						



# **Problems**

16.	(c)	Two numbers have a mean of 12 and a range of 6  What are the two numbers?  Answer:	(2)
	(d)	A set of five numbers has a mean of 7, a median of 6 and a mode of 5  (i) Write down a possible set of five numbers.	
		Answer:,,,	(3)
		(ii) Write down another possible set of five numbers.	
		Answer:,,,	(1)

## **Question 24**

Below is a list	of nu	mbei	rs tha	at Wa	ında	colle	cted o	on he	r tra	ivels.		
	3	45	24	41	36	48	22	45	8	11	45	
a) What is the	mode	e of t	his d	ata s	et?							
									Ans	wer		
b) What is the	erang	e of t	his d	ata s	et?							
									Ans	wer		
c) What is the	medi	an of	this	data	set?							
									Ans	wer		
											[	3 Marks]