YEAR 9 MATHEMATICS – TERM 3

Mean, Median, Mode & Range

(MathsWatch Clip 62)

Mean

Average

Find the total of all the numbers, then divide by the amount of numbers.

2, 2, 3, 5, 8

2+2+3+5+8 = 20

20÷5 = 4

Mean = 4

Median

Middle

The middle value when numbers are in order.

1, 3, 6, 8, 9 Median = 6

2, 3, 5, 5, 7, 9 Median = 5

1, 4, 5, 6, 8, 9

Median = (5 + 6) ÷ 2 = 5.5

Mode

Mode = Most

The value which is written the most.

2, 4, 4, 5, 6 Mode = 4

3, 3, 3, 4, 6, 6 Mode = 3

1, 1, 2, 2, 2, 4, 5 Mode = 2

4, 5, 7, 7, 8 Mode = 7

Range

LARGEST – smallest

The largest number subtract the smallest number.

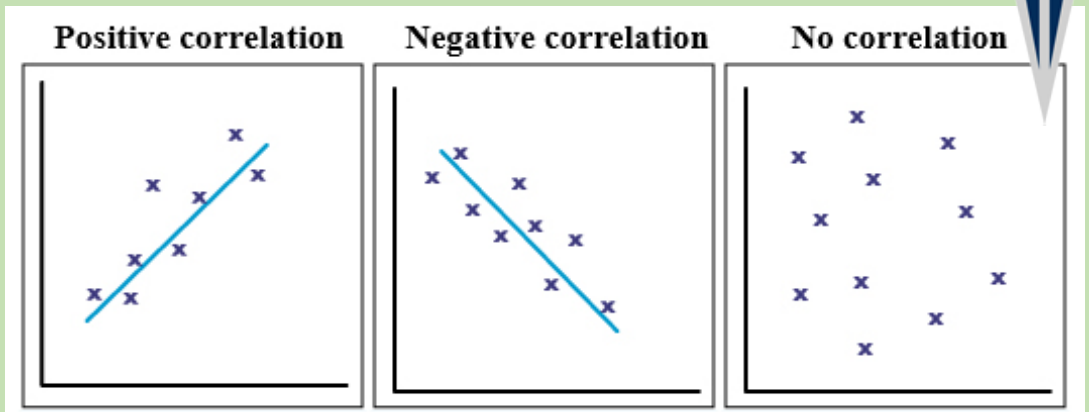
1, 1, 3, 5, 6 Range = 6 − 1 = 5

3, 6, 6, 8 Range = 8 − 3 = 5

2, 3, 4, 4 Range = 4 − 2 = 2

Operation Maths

(MathsWatch Clip 6b)



Positive correlation	Negative correlation	No correlation
The points lie close to a straight line, which has a positive gradient.	The points lie close to a straight line, which has a negative gradient.	There is no pattern to the points.
This shows that as one variable **increases** the other **increases**.	This shows that as one variable **increases**, the other **decreases**.	This shows that there is **no connection** between the two variables.

(MathsWatch Clip 129)

5. The table shows part of a train timetable from Weymouth to London Waterloo.

Weymouth	0903	0920	1003	1020	1103
Poole	0940	1007	1040	1107	1140
Bournemouth	0953	1017	1054	1117	1154
Southampton	1026	1058	1128	1158	1228
Woking	1119		1219		1319
London Waterloo	1149	1220	1249	1320	1349

A train leaves Weymouth at 09 03

(a) At what time should it arrive at London Waterloo?

..... **(1)**

Another train leaves Poole at 11 40

(b) How many minutes should it take to travel to Bournemouth?

..... minutes

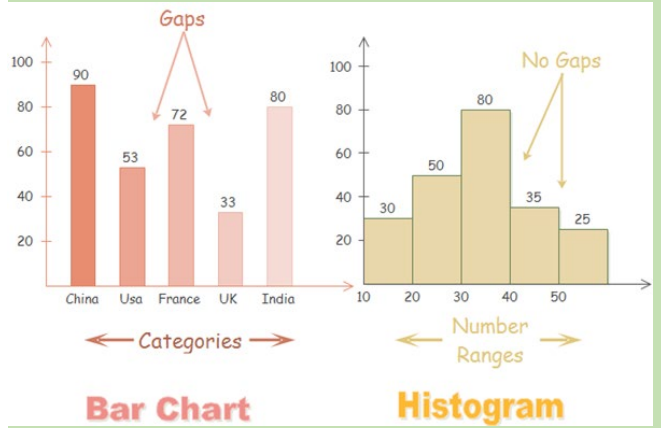
6 IS RECORDED AS 06

THE KEY SHOWS YOU HOW TO READ THE DIAGRAM

KEY: 2|5 MEANS 25

0	6 7 8
1	0 2 3 4 7 7 7 8 9
2	1 2 4 4 5 7
3	1 1 2 6 6 9
4	1 5 5 5 6 9
5	0

THIS IS NUMBER 39



Question 1: The table below shows the distance, in kilometres, from London to four other cities.

City	Distance from London
Los Angeles	8766 km
Sydney	17012 km
Tokyo	9577 km
Cape Town	9680 km

(a) Which of these cities is the furthest away from London?

(b) How far is Tokyo from London?

(c) Write the number 8766 in words.

(d) Which number in the table is a multiple of 10?

Question 2: This table shows information about which clubs are run in a school.

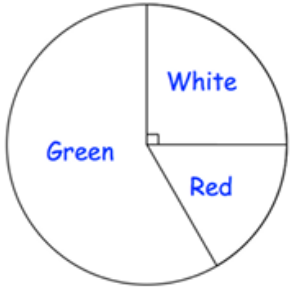
(a) Which teacher runs the football club on a Thursday?

(b) Which clubs are run on a Tuesday?

(c) Which teacher runs the most clubs?

	Mon	Tues	Wed	Thurs	Fri
Hockey	Mrs Black	Mrs Lemon		Mr Pink	
Rugby			Mr Pink Mr Green	Mr Green Mrs Lemon	
Football		Mr White	Mrs Lemon Mrs Black	Mr White	Mrs Lemon Mr White

Question 1: This pie chart shows the colour of sweets in a bag.



(a) What is the most common colour of sweet?

(b) What is the least common colour of sweet?

(c) What fraction of the sweets are white?

Question 2: The students in a school study one language.
The pie chart shows the languages studied.

(a) What is the most popular language?

(b) What is the least popular language?

(c) What fraction of the students studied French?

There are 300 students that attend the school.

(d) How many students study French?

Question 1: Here is part of a train timetable

(a) What time does the train arrive in Gold City?
(b) How long is the journey from Westville to Milton?
(c) How long is the journey from Milton to Red Island?
(d) How long is the journey from Westville to Market Place?

Westville	08 45
Milton	08 58
Gold City	09 05
Red Island	09 31
Market Place	09 54

Question 4: Shown are the ages of 20 friends.
Work out the mean age.