

Essential knowledge

Know the place value of numbers up to one billion.
 Know the meaning of the inequality symbols.. Know the place value of decimals.
 Know how to find range and median from a list.

Key Vocabulary

Integer: a whole number that is positive or negative
Interval: between two points or values
Median: Found by putting all the data values in order and finding the middle value of the list.
Negative: A number less than zero
Place value: The value of a digit depending on its place in a number. In our decimal number system.
Range: The difference between the largest and smallest numbers in a data set.

Prior learning links

Place value
 Equal division
 Understanding of decimals
 Inequality signs

Integer place value

Billions			Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O	H	T	O
		3	1	4	8	0	3	3	0	2	9

Placeholder

Rounding to the nearest power of 10

If the number is halfway between we "round up"

5495 to the nearest 1000

5475 to the nearest 10

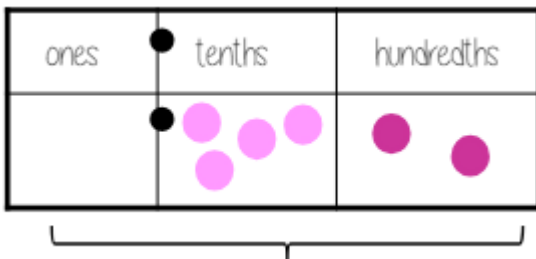


Compare integers using <, >, =, ≠

< Less than
 > Greater than
 = Equal to
 ≠ Not equal to

Two and a half million $\overset{\text{=}}{\text{O}}$ 2 500 000
 300 000 000 $\overset{\text{=}}{\text{O}}$ Three billion
 Six thousand and eighty $\overset{\text{<}}{\text{O}}$ 68 000

Decimals



Five tenths and two hundredths

$$0 \text{ ones, } 5 \text{ tenth and } 2 \text{ hundredths}$$

$$0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01 =$$

$$0 + 0.5 + 0.02 =$$

$$0.52$$

Finding the median and range

Example 1

Find the median of this set of data

4 3 9 8 12

1- put the in order 3 4 8 9 12

2- find the middle number 3 4 **8** 9 12

Example 2

Find the Range of 3 9 8 12

1- Range: Biggest value – Smallest value

2- $12 - 3 = 9$

Range = 9

Prior learning links

Write the value of the digit underlined:

- a) 2344030443
- b) 8923429
- c) 1000000000
- d) 4539

Write a number with the following:

- a) 3 million and 4 tens
- b) Write a number with 6 tenths

Integer place value

From each list of numbers, write down the largest number

- (a) 58, 39, 44, 62
- (b) 294, 208, 198, 277
- (c) 91, 103, 100, 99
- (d) 807, 711, 1021, 888
- (e) 5454, 5000, 899, 5118

Decimals

Arrange in order from smallest to largest

- (a) 3.7, 3.5, 3.9, 3.4, 3.8
- (b) 9.2, 2.9, 5.4, 1.8, 8.7
- (c) 4.6, 4.9, 14.1, 0.9, 1.2
- (d) 8.13, 8.05, 8.24, 8.09, 8.15, 8.02
- (e) 1.53, 1.48, 1.59, 1.44, 2.11, 0.98
- (f) 0.59, 1.24, 0.45, 1.34, 0.88, 2.01

Write a number with

- a) 6 tenths and 4 hundredths
- b) 7 hundredths
- c) 9 thousandths

Key Vocabulary

Define the following key words:

- Integer**
- Interval**
- Median**
- Negative**
- Place value.**
- Range:**

Rounding to the nearest power of 10

Round to the nearest 10

- a) 3994
- b) 20922
- c) 39

Round to the nearest 100

- a) 392930
- b) 2040
- c) 999

Round to the nearest 1000

- a) 1930
- b) 9999

Compare integers using < , > , = , ≠

$$58 \square 70 \quad 1468 \square 25 \quad 7 \square 9$$

$$-5 \square 0-5 \quad 100+567 \square 900-346 \quad -9 \square -12$$

Place a number either side to make the symbol correct

$$\square = \square$$

$$\square < \square$$

$$\square > \square$$

Finding the median and range

Work out the median for the each of the following

- (a) 5, 6, 6, 7, 8, 10
- (b) 1, 1, 1, 4, 6, 8, 12
- (c) 5, 5, 7, 7, 7, 8, 8, 9
- (d) 5, 7, 3, 5, 8, 9, 10, 2
- (e) 8, 3, 3, 4, 6, 8, 13, 3, 18

Find the range for each of the following

- (a) 5, 9, 1, 5, 7, 4, 3
- (b) 6, 7, 10, 8, 9, 9
- (c) 21, 15, 19, 24, 30, 26
- (d) 210, 250, 260, 180, 240
- (e) 6.2, 7.3, 8.8, 1.5, 4.1