

Reasoning – Red Chilli



Use the digit cards to make three different 5-digit numbers that match the clues.

0	1	2	3	4
5	6	7	8	9

- The digit in the ones column and the digit in the hundreds column have a difference of 2
- The digit in the hundreds column and the digit in the ten-thousands column have a difference of 2
- The sum of all the digits in the number is 19

Mo is thinking of a number.

- The number is 5,000 when rounded to the nearest 1,000
- The number is also 5,000 when rounded to the nearest 100
- The number is also 5,000 when rounded to the nearest 10
- The number is not 5,000

What is the greatest possible value of the number?

Jack has got some place value counters.



Some of my
counters have a value
of 1,000,000, some
have a value of 10,000
and some have a
value of 1

Jack picks four counters.

What different numbers greater than 1,000,000 could he make?

Jack wants to make a number greater than 5,000,000

What is the fewest number of counters he needs?

Four children each have one of these cards.

15,987

15,813

15,101

16,101

Each child gives a clue about the number on their card.

Filip says, "My number rounds to 16,000 to the nearest thousand."

Esther says, "My number has 1 hundred."

Jack says, "My number is 15,990 when rounded to the nearest ten."

Dora says, "My number is 15,000 when rounded to the nearest thousand."

Match the cards to the children.

Cofia to prove it with working out:

Are the statements true or false?

Adding ten thousand to a number only ever changes the digits in exactly one column.

The number consisting of 70 thousands and 400 ones is 700,400

3 ten-thousands is the same as 30 thousands.

400 hundreds is the same as 4 ten-thousands.

A large number added to a large number is always a large number.

A large number subtracted from a large number is always a large number.

Use some of the digit cards and the clues to work out the number.



- The ten-thousands and hundreds columns have the same digit.
- The hundred-thousands digit is double the tens digit.
- The number has six digits.
- The number is less than six hundred and fifty-five thousand.

Find as many possible solutions, giving your answers in words and numerals.