

Order a list of integers

1 Some numbers are listed in the place value table.

| TTh | Th | H | T | O |
|-----|----|---|---|---|
| 2 | 0 | 7 | 0 | 9 |
| 3 | 7 | 9 | 0 | 0 |
| 2 | 7 | 9 | 0 | 3 |
| 2 | 0 | 3 | 0 | 7 |

a) Which is the greatest number?

37,900

b) How do you know that number is the greatest?

It has the greatest number of ten thousands.

c) Write the numbers in descending order.

37,900 27,903 20,709 20,307

2 Write the values in ascending order.

a) 13,000 kg 15,700 kg 12,995 kg 8,700 kg

8,700kg 12,995kg 13,000kg 15,700kg

b) 3 million two hundred thousand 950,000 89,000

89,000 two hundred thousand 950,000
3 million

3 Look at the place value charts.

| HM | TM | M | HTh | TTh | Th | H | T | O |
|----|----|-----|-------|-----|-----|---|-------|-----|
| ● | | ● ● | ● ● ● | ● | ● ● | | ● ● ● | ● ● |



| HM | TM | M | HTh | TTh | Th | H | T | O |
|----|-------|---------|-------|-----|----|-------|---|---|
| | ● ● ● | ● ● ● ● | ● ● ● | | ● | ● ● ● | ● | |



| HM | TM | M | HTh | TTh | Th | H | T | O |
|----|-------|---------|-------|-----|----|---|---|---|
| | ● ● ● | ● ● ● ● | ● ● ● | | | | | |



a) Which chart represents the greatest number?

Tick your answer.

b) How can you know this is the greatest number without working out what each number is?

It is the only number with a counter in the hundred millions column.

c) Write the greatest number in figures.

102,212,032

d) Write the numbers in descending order.

102,212,032 47,500,000 47,401,410

- 4 Whitney is writing some numbers in order, starting with the greatest. She writes these numbers.

99,999 90,009 11,111 100,001



9 is greater than 1 and 0, so 99,999 must be greater than 100,001

Is Whitney correct? NO

Explain your answer.

She hasn't considered the place value of the digits.

- 5 Here are the transfer fees of four footballers.

| Player | A | B | C | D |
|--------------|--------------|------------|---------------|-------------|
| Transfer fee | £8.2 million | £8 million | £8.02 million | £81,000,000 |

a) Which player has the highest transfer fee? D

b) Which player has the lowest transfer fee? B

- 6 Write the missing digits to make the inequality statement correct.

E.g. $5,10\underline{1} < 5,1\underline{1}0 < \underline{5}, \underline{1}11 < \underline{5}, \underline{1} \underline{2} \underline{1}$

Is there more than one solution?

- 7 The populations of the world's largest cities are listed in the table.

| City | Country | Population |
|-------------|---------|------------|
| Tokyo | Japan | 38 000 000 |
| Delhi | India | 25 700 000 |
| Shanghai | China | 23 700 000 |
| Sao Paulo | Brazil | 21 050 000 |
| Mumbai | India | |
| Mexico City | Mexico | 20 990 000 |

The population of Sao Paulo is expected to increase by 6 million by 2050

The population of Shanghai is expected to increase by 3 million by 2050

a) Is there expected to be more people in Sao Paulo or Shanghai by 2050?

Sao Paulo

b) The population of Mumbai in India is in 5th position.

What could be the population of Mumbai? E.g. 21,000,000

How many possible answers are there?

- 8 Put one digit in each box so that the numbers are ordered from smallest to greatest from top to bottom.

E.g.

| HM | TM | M | HTh | TTh | Th | H | T | O |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 0 | <input type="text"/> | 0 | <input type="text"/> | 5 | 4 | 0 | 1 | 0 |
| <input type="text"/> | 7 | 2 | <input type="text"/> | 9 | 6 | 2 | 3 | 2 |
| <input type="text"/> | 8 | <input type="text"/> | 1 | <input type="text"/> | <input type="text"/> | 1 | <input type="text"/> | <input type="text"/> |
| 1 | 2 | <input type="text"/> | 5 | <input type="text"/> | 8 | <input type="text"/> | 4 | <input type="text"/> |
| 1 | 2 | 0 | 5 | 0 | 8 | 0 | <u>4</u> | 4 |

Is there more than one solution?