Place value puzzles

**Level 1**

1) In a 4-digit number, the sum of the digits is 19.

a) What is the largest number you can make?

b) What is the smallest number you can make?

2) In a 5-digit number, the sum of the digits is 22.

a) What is the largest number you can make?

b) What is the smallest number you can make?

3) In a 6-digit number, the sum of the digits is 31.

a) What is the largest number you can make?

b) What is the smallest number you can make?

4) In a 5-digit number, the sum of the digits is 30.

a) What is the largest number you can make?

b) What is the smallest number you can make?

5) In a 6-digit number, the sum of the digits is 11.

a) What is the largest number you can make?

b) What is the smallest number you can make?

**Level 2**

1) In a 5-digit number, the sum of the digits is 29.

a) What is the largest number you can make?

b) What is the second largest number you can make?

2) In a 6-digit number, the sum of the digits is 25.

a) What is the smallest number you can make?

b) What is the second smallest number you can make?

3) In a 7-digit number, the sum of the digits is 36.

a) What is the largest number you can make?

b) What is the second largest number you can make?

4) In a 6-digit number, the sum of the digits is 32.

a) What is the smallest number you can make?

b) What is the second smallest number you can make?

5) In a 7-digit number, the sum of the digits is 43.

a) What is the second largest number you can make?

b) What is the second smallest number you can make?

**ANSWERS**

**Level 1**

1) In a 4-digit number, the sum of the digits is 19.

a) What is the largest number you can make? 9,910

b) What is the smallest number you can make? 1,099

2) In a 5-digit number, the sum of the digits is 22.

a) What is the largest number you can make? 99,400

b) What is the smallest number you can make? 10,399

3) In a 6-digit number, the sum of the digits is 31.

a) What is the largest number you can make? 999,400

b) What is the smallest number you can make? 103,999

4) In a 5-digit number, the sum of the digits is 30.

a) What is the largest number you can make? 99,930

b) What is the smallest number you can make? 12,999

5) In a 6-digit number, the sum of the digits is 11.

a) What is the largest number you can make? 920,000

b) What is the smallest number you can make? 100,019

**Level 2**

1) In a 5-digit number, the sum of the digits is 29.

a) What is the largest number you can make? 99,920

b) What is the second largest number you can make? 99,911

2) In a 6-digit number, the sum of the digits is 25.

a) What is the smallest number you can make? 100,699

b) What is the second smallest number you can make? 100,789

3) In a 7-digit number, the sum of the digits is 36.

a) What is the largest number you can make? 9,999,000

b) What is the second largest number you can make? 9,998,100

4) In a 6-digit number, the sum of the digits is 32.

a) What is the smallest number you can make? 104,999

b) What is the second smallest number you can make? 113,999

5) In a 7-digit number, the sum of the digits is 43.

a) What is the second largest number you can make? 9,999,610

b) What is the second smallest number you can make? 1,159,999