



Playing with Numbers Ex 2.4 Q3

**Answer :**

The smallest 4-digit number is 1000.

$$\begin{aligned}
 1000 &= 2 \times 500 \\
 &= 2 \times 2 \times 250 \\
 &= 2 \times 2 \times 2 \times 125 \\
 &= 2 \times 2 \times 2 \times 5 \times 25 \\
 &= 2 \times 2 \times 2 \times 5 \times 5 \times 5
 \end{aligned}$$

$$\therefore 1000 = 2 \times 2 \times 2 \times 5 \times 5 \times 5$$

Playing with Numbers Ex 2.4 Q4

**Answer :**

The largest 4-digit number is 9999.

We have:

3	9999
3	3333
11	1111
101	101
	1

Hence, the largest 4-digit number 9999 can be expressed in the form of its prime factors as  $3 \times 3 \times 11 \times 101$ .

Playing with Numbers Ex 2.4 Q5

**Answer :**

The given number is 1729.

We have:

7	1729
13	247
19	19
	1

Thus, the number 1729 can be expressed in the form of its prime factors as  $7 \times 13 \times 19$ .

**Relation between its two consecutive prime factors:**

The consecutive prime factors of the given number are 7, 13, and 19.

Clearly,  $13 - 7 = 6$  and  $19 - 13 = 6$

Here, in two consecutive prime factors, the latter is 6 more than the previous one.

\*\*\*\*\*END\*\*\*\*\*