



Place-value of a Digit

The place value of a digit in a number depends on its position in the number. Each digit has a value that is determined by its place in the number, such as ones, tens, hundreds, thousands, etc.

For example, in the number 5,674:

- The digit 4 is in the ones place, so its value is 4.
- The digit 7 is in the tens place, so its value is $7 \times 10 = 70$.
- The digit 6 is in the hundreds place, so its value is $6 \times 100 = 600$.
- The digit 5 is in the thousands place, so its value is $5 \times 1,000 = 5,000$.
- Thus, the place value of each digit depends on its position in the number.

How to Find the Place Value of a Digit

To find the place value of a digit:

- Identify the position of the digit in the number.
- Multiply the digit by the value of its place (ones, tens, hundreds, etc.).

Properties of Place Value

- **Place Value Increases by a Factor of 10:** As we move from right to left in a number, each place value is 10 times larger than the previous one.
- **Zero in Place Value:** A zero in a place shows that no value is assigned to that place.
- **Place Value Depends on the Position:** The same digit can have different place values depending on its position. For example, in 52 and 520, the digit 5 has different place values.

Example 1

Question: Find the place value of the digit 3 in the number 45,623.

Solution:

The digit 3 is in the hundreds place.

Its place value is $3 \times 100 = 300$.

Answer: The place value of 3 in 45,623 is 300.



Example 2

Question: Find the place value of the digit 6 in the number 7,684.

Solution:

- The digit 6 is in the hundreds place.
- Its place value is $6 \times 100 = 600$.

Answer: The place value of 6 in 7,684 is 600.

Summary Points

- Place value refers to the value of a digit based on its position in a number.
- Each digit's place value is found by multiplying the digit by the value of its position.
- Place value increases by a factor of 10 as we move left in a number.
- Zero in a place indicates no value for that position.