

Significant digits and Rounding off of Numbers.

(1) **Significant digits:** The significant digits in a number are determined by the following rules:

(i) All non-zero digits in a number are significant.

(ii) All zeros between two non-zero digits are significant.

(iii) If a number having embedded decimal point ends with a non-zero or a sequences of zeros, then all these zeros are significant digits.

(iv) All zeros preceding a non-zero digit are non-significant.

Number	Number of significant digits
3.0450	5
0.0025	2
102.030070	9
35.9200	6
0.0002050	4
20.00	4
2000	1

(2) **Rounding off of numbers:** If a number is to be rounded off to n significant digits, then we follow the following rules :

(i) Discard all digits to the right of the n th digit.

(ii) If the $(n+1)$ th digit is greater than 5 or it is 5 followed by a nonzero digit, then n th digit is increased by 1. If the $(n+1)$ th digit is less than 5, then digit remains unchanged.

(iii) If the $(n+1)$ th digit is 5 and is followed by zero or zeros, then n th digit is increased by 1 if it is odd and it remains unchanged if it is even.