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Summary Article: **decimal number system**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Most commonly used number system, to the base ten. Decimal numbers do not necessarily contain a decimal point; 563, 5.63, and -563 are all decimal numbers. Other systems are mainly used in computing and include the binary number system, octal number system, and hexadecimal number system.

The decimals 0.3, 0.51, and 0.023 can be expressed as the decimal fractions $3/10$, $51/100$, and $23/1,000$. They are all terminating decimals. These fractions can equally be expressed as the percentages 30%, 51%, and 2.3%.

Decimal numbers may be thought of as written under column headings based on the number 10. For example:

hundreds	tens	units	.	tenths	hundredths
5	6	7	.		
	2	8	.	0	2

Using the table, 567 stands for 5 hundreds, 6 tens, and 7 units; 28.02 stands for 2 tens, 8 units, and 2 hundredths.

567 has no numbers after the decimal point, that is **0 decimal places**. 28.02 has 2 numbers after the decimal point, that is 2 decimal places.

Large decimal numbers may also be expressed in floating-point notation.

Addition and subtraction When adding or subtracting decimals it is important to keep the decimal points underneath each other. For example, to work out $13.56 + 4.08 + 9$:

tens	units	.	tenths	hundredths	
1	3	.	5	6	
	4	.	0	8	+
	9	.	0	0	
2	6	.	6	4	

Using the addition table, the answer is 26.64.

essays

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