



Present

The Zany World of Basic Math

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I. Integers

A. Addition

1. Adding Positive and Negative Integers
2. Adding Large Integers
3. Carrying Over

B. Subtraction

1. Subtracting Positive and Negative Integers
2. Borrowing
3. Subtracting Large Integers

C. Multiplication

1. Multiplying Positive and Negative Integers
2. Multiplying Large Integers

D. Exponents

E. Division

1. The Dividend, Divisor, and Quotient
2. Long Division
3. The Remainder
4. Checking Your Answer

F. Order of Operations

G. Rounding Off

H. Scientific Notation

II. Decimals

A. The Decimal Point and Decimal Places

B. Adding and Subtracting Decimals

C. Multiplying and Dividing Decimals

D. Rounding Off Decimals

E. Scientific Notation With Decimals

III. Fractions

A. Fraction Terms

1. The Numerator
2. The Denominator
3. Factors

B. Adding and Subtracting Fractions

1. Finding The Lowest Common Denominator
2. Prime and Composite Numbers

C. Multiplying and Dividing Fractions

D. Mixed Numbers

1. Improper Fractions

IV. Ratios and Percents

A. Ratios

B. Percent

Formulas and Such

Multiplication Rules

Positive Number \times Positive Number = Positive Product

Positive Number \times Negative Number = Negative Product

Negative Number \times Negative Number = Positive Product

Multiplication Tables

0	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Checking A Division Problem

1. Multiply the quotient by the divisor
2. Add the remainder
3. If first two steps result in the dividend then you are right

Order of Operations

Parenthesis

Exponents

Multiplication

Division

Addition

Subtraction



Rounding Off

1. Find the digit place you're rounding off to
2. Look one digit place to the right of where you're rounding off to
IF: Digit to right is
LESS THAN FIVE
Go to step three
IF: Digit to right is
GREATER THAN FIVE
Increase digit in digit place you're rounding to by one
3. Replace all digits to the right of the digit place you're rounding to with zeroes

Scientific Notation

1. Count the number of places you need to move the decimal point to the left or right, so that your number is between one and ten.
2. The number of places you moved the decimal point is your exponent. If you moved to the right, then your exponent is negative. If you moved to the left, then your exponent is positive.
3. The remaining number - after moving the decimal point - is the number you multiply your power of ten by.

Multiplying Decimals

1. Go through normal multiplication process.
2. Count the number of digits to the right of the decimal points in the numbers you multiplied together.
3. Move the decimal point in your product to the left the same number of digit places as you counted in step two.



Dividing Decimals

1. Move the decimal point in your divisor so that the last digit on the right is in the units place.
2. Move the decimal point in the dividend to the right the same number of places as you moved the decimal point in the divisor.
3. Go through normal division process.
4. Insert a decimal point in the quotient directly above the decimal point in the dividend.

Finding The Lowest Common Denominator

1. If the denominators are prime
Multiply denominators together
2. If the denominators are composite and have no other factors besides one
Multiply denominators together
3. If the denominators are composite and have factors other than one
Find the lowest common denominator that the denominators are factors of. Multiply the numerator and denominator of each fraction by a number that results in this lowest common denominator for all the denominators.

Turning A Mixed Number Into An Improper Fraction

1. Multiply the whole number times the denominator in the fraction.
2. Then add the numerator.
3. This is the numerator in the improper fraction. The denominator stays the same.

Converting A Fraction Into A Percent

1. Divide the denominator into the numerator.
2. Move the decimal point two places to the right.
3. Add a percent symbol.