## Negatives

| Adding | Subtracting | Multiplying | Dividing |
|---|---|---|---|
| (+)+ (+)=(+) | (+)- (+)= (+) | (+)x( +)= (+) | (+) ÷(+)= (+) |
| (-)+ (-)=<(- ) | (-)- (-)=(- )+(+) | (- )x(-)= (+) | (-) ÷(-)= (+) |
| (+)+ (-)=(- +)-(+) | (+)- (-)=(- )+(+) | (+)x(- )=(-) | (+) ÷(- )= (-) |
| (-)+ (+)=(- +)+(-) | (-)- (+)=(- )+(+) | (- )x(+)= (-) | (-) ÷(+)=(-) |

## Properties

| Commutative | Associative | Identity | Inverse |
|---|---|---|---|
| commutative property states that the numbers on which we operate can be moved or swapped from their position without making any difference to the answer | associative property is a property of some binary operations | identity is an equality relating one mathematical expression to another | Inverse means the opposite in effect |

## Fractions

| Adding | Subtracting | Multiplying |
|---|---|---|
| Find a common denominator. Add the numerators (and keep the denominator) Simplify the fraction. | Make sure the bottom numbers (the denominators) are the same. Subtract the top numbers (the numerators). Put the answer over the same denominator. Simplify the fraction (if needed) | Multiply the two numerators. Then multiply the two denominators. Simplify the new fractions. |

## Tools

| | |
|---|---|
| PI | 3.1415926535897-932384626433-83279502 |
| Place Value | M HTH TTH T H T O . 1/10 1/100 1/1000 |
| Order of Operation | Brackets, Parentheses, Exponents, Add-Subtract, Multiply-Divide |
| Area | B·H=A |
| Volume | B·H·W=V |
| Prime (1-100) | 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97... |
| Composite (1-100) | 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39, 40, 42, 44, 45, 46, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, 60, 62, 63, 64, 65, 66, 68, 69, 70, 72, 74, 75, 76, 77, 78, 80, 81, 82, 84, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 98, 99, 100 |
| Square Root | x2 = y |
| Denominator | Bottom number of a fraction |
| Numerator | Top number of a fraction |

Dividing The first step to dividing fractions is to find the reciprocal (reverse the numerator and denominator) of the second fraction. Next, multiply the two numerators. Then, multiply the two denominators. Finally, simplify the fractions if needed.