Division Algorithm

This algorithm covers the equation a=b/c, the division of two real numbers.

Example

**839368**

**239**

Sum

239000 239000 1

239000 478000 2

239000 717000 3

239000 956000 [ovr]

23900 740900 1

23900 764800 2

23900 788700 3

23900 812600 4

23900 836500 5

23900 860400 [ovr]

2390 838890 1

2390 841280 [ovr]

239 839129

239 839368

23.9 (decimals)

**Result: 351**

If the numerator (top line) is smaller than the bottom line, start with fractional powers of the divisor to ensure that the numerator is larger, 0.01, 0.001, 0.0001 etc.

Signs are set according to

++ or -– is +

+- or -+ is –

Square Root Algorithm

This algorithm covers the equation a=√b

Example

**839368**

x x2

|  |  |  |
| --- | --- | --- |
| 1000 | 1000000 | [ovr] |
| 100 | 10000 | 1 |
| 200 | 40000 | 2 |
| 300 | 90000 | 3 |
| 400 | 160000 | 4 |
| 500 | 250000 | 5 |
| 600 | 360000 | 6 |
| 700 | 490000 | 7 |
| 800 | 640000 | 8 |
| 900 | 810000 | 9 |
| 910 | 828100 | 1 |
| 920 | 846400 | [ovr] |
| 911 | 829921 | 1 |
| 912 | 831744 | 2 |
| 913 | 833569 | 3 |
| 914 | 835396 | 4 |
| 915 | 837225 | 5 |
| 916 | 839056 | 6 |
| 917 | 840889 | [ovr] |

Result: √839368 = 916