Outline of this class

- Using Urdhva-triyagbhyam sutra (vertically and crosswise) for division of large numbers.
- Division using Dhvajanka sutra (on top of the flag).

Vedic Mathematics

M. Krishnamoorthy (moorthy)
email address: moorthy@cs.rpi.edu
URL:
http://www.cs.rpi.edu/~moorthy/vm

Another Example

3:	38	9	8	:2 dividend row
7:		3	3	:1 remainder row

	5	3	4	:0 quotient row

Quotient is 534
Remainder is 0.

Sutra

1. Urdhva-Tiryak Sutra;

	2	34	5:	6
4		2	:1	

	8	2:	12	

Quotient is 82
Remainder is 12

What is the method?

The entire division is to be by 7 (the leading digit).

We allot one place at the right end of the dividend for the remainder portion of the answer.

1) We divide38 by 7 and we get 5 as the quotient and 3 as the remainder.

How does the method work

● There are three rows. The first row is the dividend.

● The second row is the remainder row.

● Third row is the remainder row.

● The divisor is placed according to the Dhvajanka Sutra.

Continue

4) When we divide 24 by 7 we get 3 as quotient and 3 as the remainder. As before, we place quotient 3 in the quotient row and remainder 3 in the remainder row.

5) Now the new dividend is 38-3*3=29 (3 is the remainder and 8 is the next digit in the dividend - so 38 and then subtract the product of 3 and 3 (the quotient and the last digit))

Crucial steps!!

2) We put 5 as the first quotient and place 3 on the top row. (note treat the next two digits as 39 - three from the remainder and 9 from the next digit in the dividend.)

3) From this, we deduct 3 * 5 (the last digit of the divisor and the quotient).39-15=24 is our next dividend.

Contd

6) Dividing 29 by 7, we get 4 as the quotient and 1 as the remainder. Place 4 in the quotient row and 1 in the remainder row.

7) 12 is the next digit we need to consider. However, since 2 is the designated remainder in the first row, we will subtract as usual from 12, the number 4*3 and we get the remainder is 0.

More Examples

Divide 7632 by 94

| 4 | 76 | 3 | :2 |
9		4	:2
	8	1	:18

Quotient: 81
Remainder 18