

SECTION VI

PROPORTION

70) Rule of Three Terms¹

The first and last terms, which are the argument (given) and requisition (demand), must be of like denomination; the fruit, which is of a different species, stands between them: and that, being multiplied by the demand and divided by the first term, gives the fruit of the demand.

In the inverse method, the operation is reversed.

<u>Terminology</u>	argument	fruit	requisition
	prama'na	phala	ichha
	(given)	(result)	(demand)

The required answer is 'fruit of the demand'.

- *pramana*(1st) and *ichha*(3rd) are of the same type, species or denominations;
- *phala*(2nd) and *ichha's phala*(demand's fruit) are another

Method

- **Multiply** last two terms (2nd and 3rd terms)
- **Divide** by the first (1st)

Example: If 7 pens cost Rs.15, tell cost of 21 pens?

pens	cost (Rs)	pens	
7	15	21	(1 st and 3 rd items are the same species, 2 nd and answer are another species)

- **Multiply** last two 15, 21
- **Divide** by the first 15, 21; 7. 15, 3 45

Cost of 21 pens, Rs.45

¹ The first term is *pramana*, the measure or argument; the second is its fruit, *phala*, or produce of the argument; the third is *ichha*, the demand, requisition, desire or question.

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Example

If 2 kg sugar costs Rs. 29, how much sugar can be got with Rs. 35?

Rs.	kg	Rs.	
29	2	35	(1 st and 3 rd items are the same species, 2 nd and answer are another species)

• **Divide** Product of last two by the first 2, 35; 29 $2\frac{12}{29}$ kg

Rs. 35 can get $2\frac{12}{29}$ kg of sugar.

71) Example

If two and a half palas of saffron be obtained for three-sevenths of a nishca; say instantly, best of merchants, how much is got for nine nishcas?

Statement: $\frac{3}{7}$ $\frac{5}{2}$ $\frac{9}{1}$

• **Divide** Product of last two by the first $\frac{5}{2}, \frac{9}{1}; \frac{3}{7}$ $\frac{105}{2}$ palas

You get 52 palas and 2 carshas.

