Decimals

Decimals are fractions whose denominators are 10,100,100 e.t.c.

eg : 23 . 005

- 23 → whole number part
- 005 → Decimal part

like decimals — same decimal place, 5.25 , 6.89

unlike decimals — different decimal place, 5.25 , 6.893

Comparing Decimals

eg : Arrange in ascanding order
2.01 , 1.9, 0.95, 3.2 and 2.758

I Change to like decimals
2.010 , 1.900,0.950, 3.200, 3.200, 2.758

II write corresponding numbers
2010, 1900, 950,3200,2758

III Now are angle
950, 1900, 2010, 2753, 3200

IV 0.95, 1.9, 2.01, 2.750, 3.2

Addition

eg : Add 3.01 , 2.58 and 6.9

3 . 01 ⇒ Keep decimal points under each other
2 . 58 ⇒ Write digts in the correct place value columns
6 . 9 ⇒ Add like whole numbers.
12 . 49

Convert

(i) decimal into fraction

eg : 3.75 = $\frac{375}{100}$ = $\frac{15}{4}$

(ii) fraction into decimal

(i) $9\frac{1}{4}$ = $9\forall\frac{1\%25}{4\%25}$ = $9\forall\frac{25}{100}$ = 9.25

(ii) $\frac{7}{125}$ = $\frac{7\%8}{125\%8}$ = $\frac{56}{1000}$ = 0.0056

Subtraction

Subtract : 8.96 from 25.1

25 . 10 ⇒ change to
&8 .96 like decimals , then
16 . 14 subtract like whole no.

Multiplication

decimal by decimal

(i) First multiply as whole no
(ii) Count the no. of digits to the right of the decimal point
(iii) Add the no. of digits counted
(iv) Put decimal point in the product by counting the digits from the right most place

eg : 256.7 × 0.005 =
1 decimal place, 3 decimal place = 1.2835
1+3 = 4 decimal place

eg :- cost of 1m cloth = Rs. 15.5
cost of 1.5m cloth
= Rs. 15.5 × 1.5 = Rs. 23.25

by 10,100, 1000

move decimal point in the number to the right by as many places as there are zeros. over 1

eg 0.53 × 10 = 5.3
0.53 × 100 = 53
0.53 × 1000 = 530

eg :- cost of 2.5m cloth = Rs. 41.25
cost of 1m cloth = Rs. 41.25 ÷ 2.5
= Rs. 16.50

Division.

by 10, 100 or 1000 -[shift the decimal point]

15.6 ÷ 10 = 1.56 [1 place to the left]

30.9 ÷ 100 = 0. 309 [2 place to the left]

by decimal no.

0.165 by 1.5

= $\frac{165}{100} - \frac{15}{10}$

= $\frac{1}{100}[165 - 15]$

= $\frac{11}{100}$ = 0.11

by whole number

1.575 ÷ 35 = $\frac{1}{1000}$ [1575 ÷ 35]

= $\frac{1}{1000}$ [45] = 0.045