

Converting Fractions to Decimal Fractions - Part 1

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In the previous segment, we learnt **how to convert decimal fractions to fractions**. In this segment, we will learn how to convert fractions to decimal fractions.

How to Convert fractions to decimal fractions?

A fraction can be converted to its decimal form by the following steps:

1. Divide the numerator by the denominator.
2. If it does not divide exactly, keep adding zeros to the dividend until the remainder is zero.
3. Place the decimal point on the quotient before as many digits as the number of zeros added.
4. The number thus obtained is the decimal form of the given fraction.

For example,

Q. Convert $\frac{6}{8}$ to its decimal form.

Solution

Divide the numerator by the denominator.

$$8 \overline{) 6}$$

6 does not divide exactly into 8. So, add a zero to the dividend.

$$8 \overline{) 60}$$

Now, divide 60 by 8. 8 times 7 is 56. And 60 minus 56 is 4.

$$\begin{array}{r}
 7 \\
 \hline
 8 \overline{) 60} \\
 \underline{56} \\
 4
 \end{array}$$

The remainder is not zero. So, add another zero to the dividend and get it down, next to 4.

$$\begin{array}{r} 7 \\ 8 \overline{) 600} \\ \underline{56} \\ 40 \end{array}$$

8 times 5 is 40. And 40 minus 40 gives 0.

$$\begin{array}{r} 75 \\ 8 \overline{) 600} \\ \underline{56} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

Since two zeros were added, the decimal form will have 2 decimal places. So, put a decimal point before 2 digits in the quotient, that is 75, to get 0.75.

$$\text{Thus, } \frac{6}{8} = 0.75$$

Summary

What's next?

In the next segment of Class 10 Maths, we will learn how to **convert fractions** with denominators as multiples of tens into decimal forms.