Equivalent Rational Numbers

Two rational numbers are equivalent if their lowest form or standard form after reduction, is equal. In any rational number, its numerator and denominator are multiplied or divided by the same integer to give the equivalent rational number.

There are two methods to find the equivalent rational numbers:

➡ **Equivalent Rational Numbers by multiplication**

For a rational number a/b, consider a non-zero integer m, then a × m / b × m is a rational number equivalent to a/b.

Let us understand with an example:

Example: Find the equivalent rational number of 5/7

Solution: $\frac{5 \times 5}{7 \times 5} = \frac{25}{35}$ (Here, the non-zero integer m is 5)

Hence, the equivalent rational number of 5/7 is 25/35

➡ **Equivalent rational numbers using Division**

For a rational number a/b, consider a common divisor m, of a and b, then a ÷ m / b ÷ m is a rational number equivalent to a/b.

Let us understand with an Example:

Example: Find the equivalent rational numbers of 36/72.

36 ÷ 2 / 72 ÷ 2 = 18/36