

**RATIONAL NUMBERS**

**Grade: VIII**

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**Definition** : A rational number is of the form p/q where q is non zero.

E.g. , 6, 8

All the integers are rationals. i.e 

Definition of co-prime: If the HCF of two numbers p and q is 1,then the numbers are called co-primes.

E.g. 2,5; 8,3; 11,15

**Properties of rationals:**

(i) closure: 

(ii) Commutative : a + b = b +a, a.b=b.a

(iii) Associative: a+(b+c)= (a+b)+c

 a.(b.c) = (a.b).c

(iv) Identity: a + 0 = 0 +a = a, the identity element in addition is 0

 a.1=1.a=a, the inverse element in multiplication is 1.

(v) Inverse: a +(-a) = (-a) +a = 0

 a x (1/a) = (1/a) x a= 1