In the name of Allah, the Most Gracious, the Most Merciful

# Afroz Maths Course

## FRACTIONS

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# Fractions

**1) Fraction :** If an object is divided into some equal parts then the equal part of that whole object is called 'Fraction'  Fraction is represented in the form of a/b.   The number on the top is called 'Numerator' and the number in the bottom is called 'Denominator'.

Fraction = $\dfrac{\text{Numerator}}{\text{Denominator.}}$     $\dfrac{1}{2}$

**2)**     1/2  is called 'Half'                 1/4 is called 'One-fourth' or 'Quarter'

3/4 is called 'Three-fourths' or 'Three quarters'

1/3 is called 'One third'                    2/3 is called 'Two-thirds'

1/5 is called 'One-fifth'                    2/5 is called 'Two-fifths'

**3)**  In a number line of fractions, every fraction  is less than the fraction which is on its right side and is greater than the fraction which is on the left side.

**4)  Equivalent Fractions**     $\dfrac{1}{2}$ = $\dfrac{2}{4}$

**5)  Like fractions**

When the denominator of two or more fractions are the same, they are called 'Like fractions'

**Ex :**   $\dfrac{1}{5}$     $\dfrac{2}{5}$

**6)   Unlike fractions**

When the denominator of two or more fractions are different, they are called 'Unlike fractions'

**Ex :**   $\dfrac{2}{5}$     $\dfrac{4}{9}$

**7)**   $\dfrac{1}{2} > \dfrac{1}{3}$

**8)**    Simplest form of a fraction is the fraction whose numerator and denominator are relatively  prime numbers.

$\dfrac{\cancel{24}^{2}}{\cancel{60}_{5}} = \dfrac{2}{5}$

**9)  Proper fractions**     If the numerator is less than the denominator in a fraction, it is called 'Proper fraction' The value of the Proper fraction is less than 1.

**Ex :**   $\dfrac{3}{4}$

**10) Improper fractions**   If the numerator is greater than or equal to the denominator in a fraction, it is called 'Improper fraction' The value of the Improper fraction is greater than 1.

**Ex :**   $\dfrac{6}{4}$

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**11)   Improper fractions can be changed to mixed fractions (Mixed numbers)**

**Ex :**   $\dfrac{6}{4}$   $=$   $1\dfrac{1}{2}$   **This is a Mixed fraction**

**Mixed fraction  is greater than 1**   **Ex :** $\dfrac{6}{4}$   $=$   $1\dfrac{1}{2}$

$1\dfrac{1}{2}$   **is greater than 1**

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**12)**

Whole number ⟍   $1\dfrac{1}{2}$   ⟋ Proper fraction

**So, Mixed fraction is a combination of a whole number and a proper fraction**

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**13)**   $1\dfrac{1}{2}$   $=$   $\dfrac{3}{2}$   ... This is an Improper Fraction

**So, Mixed fractions (Mixed numbers) can be changed to Improper fractions.**

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**14)**   $3\dfrac{1}{7}$   $=$   $3$   $+$   $\dfrac{1}{7}$