**Like and Unlike Fractions**

*The fractions with the same denominators are called****like fractions****.*

Eg)1/5, 3/5, 2/5, 4/5, 6/5 are***unlike fractions****.*

*The fractions with different denominators are called****unlike fractions****.*

Eg) 3/4, 5/6, 1/3, 4/7, 9/9 *are* ***unlike fractions****.*

# Comparison of Like Fractions:

# 

shaded portion represents 2/7



 shaded portion represents 3/7



*shaded portion represents 5/7*

It is clear that 2/7 < 3/7 < 5/7  
  
or 5/7 > 3/7 > 2/7

**Thus, in like fractions or fractions having same denominator, that fraction is greater which has the greater numerator.**  
  
Accordingly, 3/5 > 2/5; 2/5 < 3/5  
  
15/17 > 10/17; 10/17 < 15/17

If there are three or more like fractions, they may be arranged in ascending (increasing) and descending (decreasing) order. The order will be according to the order of the numerators.  
  
(a) **Ascending order:** 1/9, 2/9, 3/9, 4/9, 5/9, 7/9, 8/9:

as, 1 < 2 < 3 < 4 < 5 < 7 < 8

(b) **Descending order:** 8/9, 7/9, 5/9, 4/9, 3/9, 2/9, 1/9:

as, 8 > 7 > 5 > 4 > 3 > 2 > 1

*Similarly again;*

(a) **Ascending order:** 5/17, 7/17, 8/17, 11/17, 13/17, 14/17, 16/17:  
  
as, 5 < 7 < 8 < 11 < 13 < 14 < 16

(b) **Descending order:** 16/17, 14/17, 13/17, 11/17, 8/17, 7/17, 5/17:  
  
as, 16 > 14 > 13 > 11 > 8 > 7 > 5

# Comparison of Fractions having the same Numerator:

# 

# Shaded portion = 3/10

# 

# *Shaded portion = 3/5*

# Shaded portion = ¾

# 3/10 < 3/5 < 3/4 or 3/4 > 3/5 > 3/10 In the fractions having the same numerator, that fraction is greater which has the smaller denominator. 5/11 > 5/17, 5/17 < 5/11, 7/15 > 7/16, 7/16 < 7/15 .Shaded portion = ¾

If there are three or more fractions having the same numerator, they may be arranged in ascending (increasing) and descending (decreasing) order.

The order will be in opposite order of denominators. The bigger denominator will make the smaller fraction.  
  
(a) **Ascending order:** 1/9, 1/7, 1/5, 1/4, 1/3

as 9 > 7 > 5 > 4 > 3

(b) **Descending order:**5/3, 5/6, 5/9, 5/12, 5/18

as 3 < 6 < 9 < 12 < 18

*Similarly again;*  
  
(a) **Ascending order:**7/11, 7/9, 7/6, 7/5, 7/2

as 11 > 9 > 6 > 5 > 2

(b) **Descending order:**11/1, 11/5, 11/7, 11/10, 11/15

as 1 < 5 < 7 < 10 < 15