**FIND LOWEST COMMON DENOMINATOR WITH TRICKY FRACTIONS**

***HOW DO YOU FIND THE LOWEST COMMON DENOMINATOR OF THE FOLLOWING***

‘1/4; 1/3; 2/3; 1/5; 1/7 ??

**THE APPROACH IS AS PER FOLLOWS:**

***Write out each UNIQUE Denominator as per follows:***

4: 2 \* 2

3: 1 \* 3

5: 1 \* 5

7: 1\* 7

Then, you multiply each unique number across the population. So as per follows…

1\*2\*2\*3\*5\*7

***This equals 420 which is what we concluded earlier in Tuition***

**ANOTHER EXAMPLE:**

Please see below:

FINDING THE LOWEST COMMON DENOMINATOR:

‘3/24 ; 5/116

STEP 1: Write out the factors to derive the denominator

STEP 2: Keep breaking out numbers that are NOT Prime Numbers. On the left hand side, that would be 8

STEP 3: List out the Prime Numbers and these will derive the initial denominator (eg in the case of 24, the prime numbers from the tree are 3\*2\*2\*2)

**24: 3\*2\*2\*2**

**116: 2\*2\*29**

**TO FIND THE LCD, LIST OUT THE UNIQUE NUMBERS IN EACH SET. IF THEY BOTH HAVE 2, YOU ONLY LIST THAT INDIVIDUAL 2 ONCE:**

SO FOR THE ABOVE:

3\*2\*2\*2\*29 = 696 .

Therefore, 696 is the lowest common denominator

**HIGHEST COMMON MULTIPLE:**

USING THE ABOVE, LIST OUT EACH COMMON NUMBER IN EACH SET (So ,each set has a 2 twice):

2\*2 = 4

So 4 is the Highest Common Multiple