PRIME FACTORIZATION

- Prime Factorization to determine what the prime factors of a number are. Finding which prime numbers multiply together to make the original number.
- i. . To determine the prime factors of a number, we divide the number by the prime numbers, i.e. $12 = 2 \times 2 \times 3$ LCM (Least Common Multiple) – we use the LCM to add and subtract fractions
 - i. Determine the prime factors of each number
 - ii. Use the prime factors of each number the most times that they occur
 - iii. i.e. LCM of 18 & 40
 - iv. $18 = 2 \times 3 \times 3$
 - ν. $40 = 2 \times 2 \times 2 \times 5$
 - vi. LCM = 2 x 2 x 2 x 3 x 3 x 5 = 360

MULTIPLICATION

- → Multiply the denominators by the denominators and the numerators by the numerators.
- \rightarrow A whole number can be thought of as a fraction (i.e., 6 = 6/1).
- → To multiply with mixed numerals, first convert the mixed numerals to fractions.

EQUIVALENT FRACTIONS – are they the same?

- Multiply the numerator of one fraction bittle@ tominator of the other fraction, for both fractions.
 "Cross Multiplication"
 Compare if the numerator of equal page

- Cross Multiplication the procedure of multiplying the numerator of one fraction by the denominator of the other fraction, for both fractions.
- Reciprocal the inverse fraction of a number, so that the product of the number and its reciprocal is 1. It is the number flipped.

DIVISION

→ To divide fractions, you must multiply the dividend by the reciprocal of the divisor

ADDITION & SUBTRACTION

- → If the denominators are the same, then add (or subtract) the numerators and place the total over the denominator.
- → If the denominators are not the same, then you cannot add or subtract. You must make the denominators the same first:
 - 1. Find the Least Common Denominator (LCD) by finding the LCM
 - 2. Multiply by 1 in the form of n/n to get the LCD
 - 3. Simplify your answer