Tuesday 16th June 2020

Adding three and subtracting fractions by finding the lowest common denominator (LCD)

can all go into? E.g. 30 can be divided by 3, 5, 2 and 6 and is the LCD

Steps to success

1. Find the lowest common denominator- what is the smallest number that the denominators

Example:

$$\frac{1}{3} - \frac{2}{5} + \frac{1}{2} + \frac{1}{6}$$

2. Convert all of the fractions into the equivalent fractions- example- using the LCD of 30. All of these need to be converted into 30ths. So for 1/3 to get 3 to 30 (the denominator), we need to multiply by 10, so we must multiply the numerator by 10 too. This would be 10/30. Repeat this until you have converted all the fractions into equivalent fractions.

3. Once you have equivalent fractions we need to do the calculation (see below)

Tip: To make the calculation simpler, you can add all the positives first and subtract the negatives at the end. E.g. 10 + 15 + 5 = 30 30-12 = 18

4. Finally, make sure you find the an- $\frac{10}{30} - \frac{12}{30} + \frac{15}{30} + \frac{5}{30} = \frac{18}{30} + \frac{3}{5}$ 4. Finally, make sure you find the an-swer in its lowest form- both can be divided by 6 in the example.

Find the total for each set of fractions below:

<u>Fractions</u>	Working out	<u>Total</u>
$\frac{2}{10} + \frac{3}{4} + \frac{1}{10} + \frac{1}{3}$		
$\frac{3}{5} + \frac{1}{3} + \frac{1}{5}$		
$\frac{1}{10} + \frac{2}{5} + \frac{2}{10} + \frac{1}{3}$		
$\frac{3}{5} + \frac{1}{2} - \frac{3}{5}$		
$\frac{3}{10} + \frac{1}{4} - \frac{1}{10} + \frac{1}{3}$		
$\frac{1}{3} + \frac{1}{8} + \frac{2}{3}$		
$\frac{1}{10} + \frac{1}{3} - \frac{2}{10} + \frac{1}{8}$		