Fractions

Sometimes when adding (or subtracting) I find it hard to determine a common denominator. Is there an easy way out?

It is best if you can determine the smallest common denominator when adding or subtracting fractions, but when the chips are down, ***any*** common denominator is better than nothing!

You can use what I call the "panic button" approach.

To do this, simply multiply the denominators that you have. The result is going to be the common denominator.

Example

$$\frac{5}{6}+\frac{1}{4}=?$$

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Multiply these denominators together.

6 x 4 = 24

24 will be your choice for the common denominator.

$$\frac{5\times\mathbf{4}}{6\times\mathbf{4}}+\frac{1\times\mathbf{6}}{4\times\mathbf{6}}=$$

$$\frac{20}{24}+\frac{6}{24}$$

$$=\frac{26}{24}$$

$$=\frac{13}{12}$$

$$=\mathbf{1}\frac{\mathbf{1}}{\mathbf{12}}$$

Doing this work will create the common denominators of 24.

Example

$$\frac{5}{9}-\frac{1}{6}=?$$

Using the "panic button" approach gives a common denominator of ***54***. (Since 9 x 6 = 54)

Note how this is used to finish the problem:

$$\frac{5\times\mathbf{6}}{9\times\mathbf{6}}-\frac{1\times\mathbf{9}}{6\times\mathbf{9}}=\quad\frac{30}{54}-\frac{9}{54}=\quad\frac{21}{54}=\quad\frac{\mathbf{7}}{\mathbf{18}}$$