

Tuesday 12th May

L.K: To add fractions with different denominators

When we add fractions with different denominators we need to change those denominators so that they are the same. When doing this, we need to make sure that whatever we do to the denominator we also need to do to the numerator. This is very important or your answer will be smaller than it should be!

Example:

$$\frac{1}{3} + \frac{2}{6} =$$

We can see that the denominators are not the same and so we cannot add these fractions. They must be changed to be the same number. We know that there are two "3's" in "6", so that if we double $\frac{1}{3}$ we would get $\frac{2}{6}$. We now have the same denominator and so we can carry on adding.

$$\frac{2}{6} + \frac{2}{6} = \frac{4}{6}$$

We do not need to change the other fraction and we only add the numerators, not the denominators.

However, we can sometimes have fractions that are not in the same multiplication table.

$$\frac{1}{3} + \frac{2}{7} =$$

We still need to have the same denominators, so we must multiply each fraction by the denominator of the other fraction.

$$\times 7 \left(\frac{1}{3} \right) + \left(\frac{2}{7} \right) \times 3$$

So $7 \times 1 = 7$ and $7 \times 3 = 21$. The fraction on the left is now $\frac{7}{21}$.

3×2 is 6 and 3×7 is 21. The fraction on the right is now $\frac{6}{21}$.

We now have:

$$\frac{7}{21} + \frac{6}{21} = \frac{13}{21}$$

The denominators are the same and we can add the fractions properly!

Now try these:

1) $\frac{1}{4} + \frac{2}{7} =$

2) $\frac{3}{7} + \frac{2}{4} =$

3) $\frac{1}{9} + \frac{4}{5} =$

4) $\frac{2}{3} + \frac{2}{5} =$

5) $\frac{9}{10} + \frac{2}{3} =$

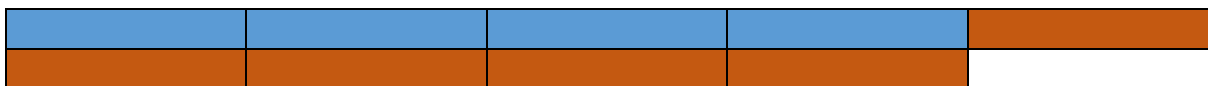
Reasoning and Problem Solving

One Star

- 1) I have $\frac{2}{7}$ of a piece of cake. How much more cake would I need to have the whole thing?
- 2) Can you show one fifth add two fifths with a diagram?
- 3) I add the fractions $\frac{1}{5}$ and $\frac{2}{10}$ and I get the answer $\frac{3}{15}$. Am I correct? Explain why.

Two Star

- 1) When I add $\frac{2}{7}$ and $\frac{2}{14}$ I get the answer $\frac{4}{14}$. Am I correct? What mistake did I make?
- 2) I have I order a box of 20 Skittles packets from Amazon. As it is being delivered, 6 packets of Skittles are found and added to my order. How many packets of Skittles do I end up with? Do I have more or less than my original order?
- 3) Using the diagram below, work out the fraction equation and work it out.



Three Star

- 1) I have the fraction $\frac{2}{7}$. What two fractions could I add together to make this fraction?
- 2) A) I have a packet of Rolo's with 13 sweets. Write this amount as a fraction.
b) I give away all but one of my Rolo's. How many Rolo's am I left with? Can you show this using fractions?
- 3) Solve the fraction equations below.



i) $\frac{\square}{3} + \frac{\square}{\square} = \frac{\square}{\square} = 1$

ii) $1 - \frac{\square}{\square} = \frac{2}{\square}$



i) $\frac{\square}{6} + \frac{\square}{\square} = \frac{\square}{\square} = 1$

ii) $1 - \frac{\square}{\square} = \frac{\square}{\square}$



i) $\frac{4}{\square} + \frac{\square}{\square} = \frac{\square}{\square} = 1$

ii) $1 - \frac{\square}{\square} = \frac{\square}{\square}$



i) $\frac{1}{\square} + \frac{\square}{\square} = \frac{\square}{\square} = 1$

ii) $1 - \frac{\square}{\square} = \frac{\square}{\square}$