7/4 Maths w/c 27th April 2020

4. We are learning to add fractions together where the number on the bottom (denominator) is different.

For this task, we will need the work we did on fractions that are equal to each other.

Look at the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{1}{2}$$ | is the same as | $$\frac{2}{4}$$ | $$\frac{3}{6}$$ |
| $$\frac{1}{3}$$ | is the same as | $$\frac{2}{6}$$ |  |

Can you see the pattern that would help us here?

|  |  |  |
| --- | --- | --- |
| 1 | x2 | 2 |
| 2 | x2 | 4 |

If we multiply the top number AND the bottom number by the same amount, we can create an equal fraction. It works for all the other fractions above.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | x3 | 3 |  | 1 | x2 | 2 |
| 2 | x3 | 6 |  | 3 | x2 | 6 |

We can use this rule to answer questions where we have to add fractions that have different numbers on the bottom. Don’t forget, you have already found fractions that are equal by using the fraction wall last lesson too. You can use that if you find it easier.

Step 1 – Look at the bottom numbers of the fractions

|  |  |  |
| --- | --- | --- |
| 1 | + | 1 |
| 2 | 4 |

The bottom numbers are ‘2’ and ‘4’.

Step 2 – Find a way to make the bottom numbers the same.

I can turn the ‘2’ into a ‘4’ by multiplying by 2. I have to multiply the number on the top by 2 as well.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ~~1~~ | x2 | 2 | + | 1 | = | ? |
| ~~2~~ | x2 | 4 | 4 |

Step 3 – Now add the fractions.

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{1}{4}$$ | $$\frac{1}{4}$$ | $$\frac{1}{4}$$ | $$\frac{1}{4}$$ |

0 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ~~1~~ | x2 | 2 | + | 1 | = | 3 |
| ~~2~~ | x2 | 4 | 4 | 4 |

Now you try the examples below:

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

We can turn the ‘3’ into a ‘6’ by multiplying by 2. Find the fraction that is equal to $\frac{1}{3}$

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | x2 |  |  |
| 3 | x2 |  |  |

Now, swap $\frac{1}{3}$ for your new fraction in the question above.

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

And add together to find the answer.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $$\frac{1}{6}$$ | $$\frac{1}{6}$$ | $$\frac{1}{6}$$ | $$\frac{1}{6}$$ | $$\frac{1}{6}$$ | $$\frac{1}{6}$$ |

0 1

Use your fraction wall or multiplication to make it so that the fractions in the questions below both have the same numbers on the bottom.

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

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

c) $\frac{1}{2}$ + $\frac{1}{8}$ =

d) $\frac{2}{5}$ + $\frac{2}{10}$ =