7/4 Maths w/c 27th April 2020

1. We are learning to take fractions away from 1.

We have already seen that when we have a fraction where the number on the top and the number on the bottom are the same, this is the same as one whole one.

|  |  |  |
| --- | --- | --- |
|  |  | $\frac{4}{4}$ is the same as ‘1’ |
|  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | $\frac{5}{5}$ is the same as ‘1’ |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  | $\frac{12}{12}$ is the same as ‘1’ |
|  |  |  |  |
|  |  |  |  |

Here are the steps to take a fraction away from a whole number.

1 – $\frac{1}{2}$ = ?

a) turn the ‘1’ into a fraction. Because we are taking away a ½, we should turn ‘1’ into a fraction with two on the bottom. This would be $\frac{2}{2}$. It looks like this as a picture.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | $\frac{2}{2}$ is the same as ‘1’ | We can see how this is the same as the pictures above. |

b) Because 1 and $\frac{2}{2}$ are the same thing, we can swap 1 for $\frac{2}{2}$ in our question.

1 – $\frac{1}{2}$ = ? becomes $\frac{2}{2}$ - $\frac{1}{2}$ = ?

c) We can do $\frac{2}{2}$ - $\frac{1}{2}$ = ? because it is the same as how we took away fractions last week.

|  |  |
| --- | --- |
| $$\frac{1}{2}$$ | $$\frac{1}{2}$$ |

 $\frac{2}{2}$ - $\frac{1}{2}$ = $\frac{1}{2}$

On a number line it would look like this.

|  |  |
| --- | --- |
| $$\frac{1}{2}$$ | $$\frac{1}{2}$$ |

0 1

Here is a second example.

1 - $\frac{2}{5}$ = ?

a) turn 1 into a fraction

* The fraction has a 5 on the bottom.
* 1 is the same as $\frac{5}{5}$

b) swap the 1 for the fraction in the question

* $\frac{5}{5}$ - $\frac{2}{5}$ = ?

c) use a number line or bar diagram to answer the question

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ |

0 1

* $\frac{5}{5}$ - $\frac{2}{5}$ = $\frac{3}{5}$

Now you try with these examples.

1) 1 - $\frac{3}{4}$ = ?

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

0 1

2) 1 - $\frac{1}{6}$ = ?

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

0 1

3) 1 – $\frac{5}{8}$ = ?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ | $$\frac{1}{8}$$ |

0 1

We can use the bottom numbers on a fraction to help us work out questions like these more quickly.

When adding fractions together to make 1, the numbers of the top of the fractions need to equal the number on the bottom of the fractions. Look at this example.

1 = $\frac{3}{5}$ + $\frac{2}{5}$ Here the 3 and 2 added together equal the 5 on the bottom of the fraction. We can check it is correct here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ | $$\frac{1}{5}$$ |

0 1

Another example:

1 = $\frac{2}{4}$ + $\frac{2}{4}$ Here the 2 and 2 added together equal the 4 on the bottom of the fraction. We can check it is correct here.

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

0 1

Use this rule to help you fill in the blanks in the table below. *Don’t forget, the numbers on the top of the fractions need to add up to the number on the bottom of the fraction.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | = | $$\frac{1}{2}$$ | + | $$\frac{}{2}$$ |
| 1 | = | $$\frac{2}{3}$$ | + | $$\frac{}{3}$$ |
| 1 | = | $$\frac{4}{5}$$ | + | $$\frac{}{5}$$ |
| 1 | = | $$\frac{6}{8}$$ | + | $$\frac{}{8}$$ |
| 1 | = | $$\frac{5}{10}$$ | + | $$\frac{}{10}$$ |
| 1 | = | $$\frac{7}{10}$$ | + | $$\frac{}{10}$$ |

Give some examples of your own of how 1 can be split into fractions below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | = | $$\frac{}{2}$$ | + | $$\frac{}{2}$$ |
| 1 | = | $$\frac{}{3}$$ | + | $$\frac{}{3}$$ |
| 1 | = | $$\frac{}{4}$$ | + | $$\frac{}{4}$$ |
| 1 | = | $$\frac{}{5}$$ | + | $$\frac{}{5}$$ |
| 1 | = | $$\frac{}{6}$$ | + | $$\frac{}{6}$$ |
| 1 | = | $$\frac{}{7}$$ | + | $$\frac{}{7}$$ |
| 1 | = | $$\frac{}{8}$$ | + | $$\frac{}{8}$$ |
| 1 | = | $$\frac{}{9}$$ | + | $$\frac{}{9}$$ |
| 1 | = | $$\frac{}{10}$$ | + | $$\frac{}{10}$$ |