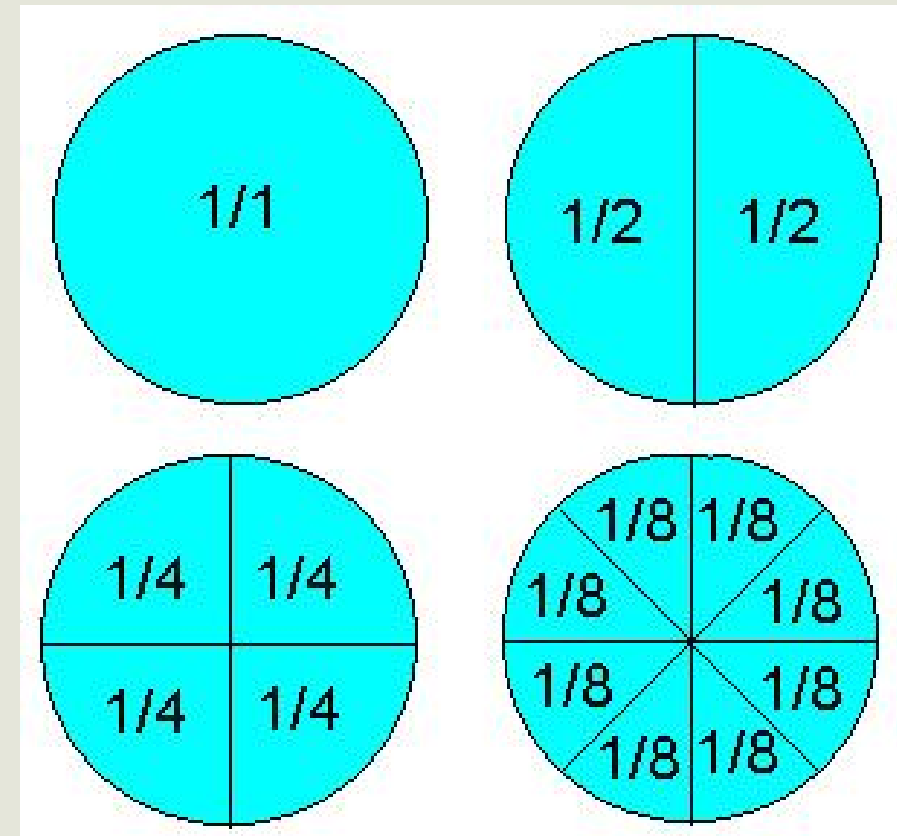


Fractions - Adding

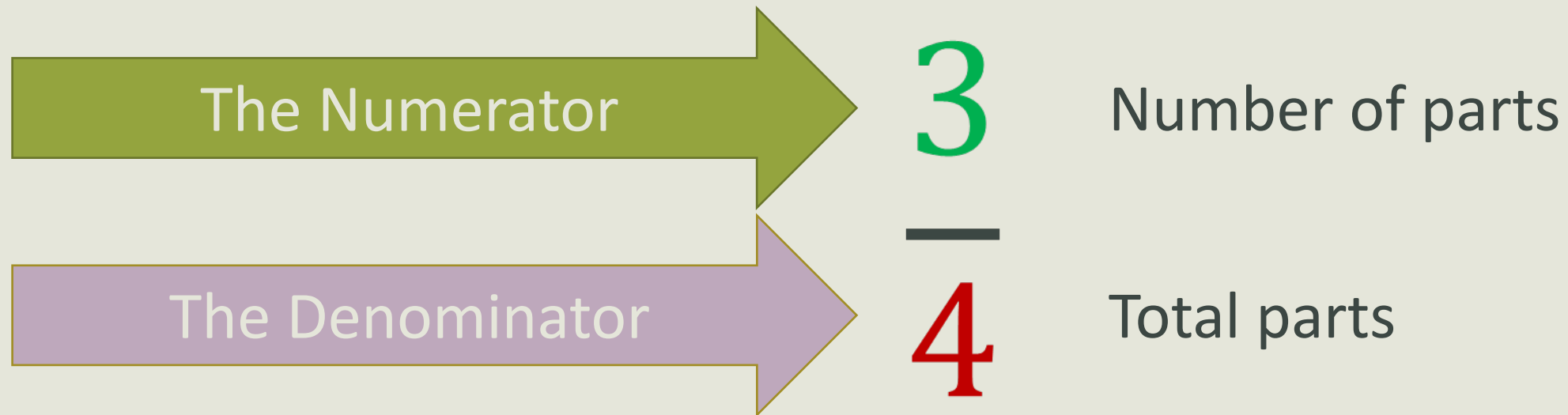
By Mark Gillan

Reminder

- Fractions illustrate a part
- Top number is the numerator
- Bottom number is the denominator
- For example, $\frac{1}{4}$ is 1 part of 4
- And, $\frac{3}{4}$ would be 3 parts of 4, in other words 3 of $\frac{1}{4}$ ($\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$)
- As we see, adding the same denominators together just increases the numerator



Reminder again – numerator and denominator



Adding two fractions with different denominators

- We know how to add fractions of the same denominator together
- For example, $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$
- We just add the numerators together and the denominator remains the same
- However, what about adding two fractions containing different denominators?

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

The two step

- Consider the sum
- Step 1 the answer numerator
- Step 2 the answer denominator
- The answer

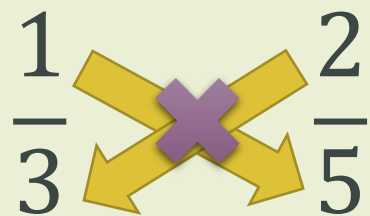
$$\frac{1}{3} + \frac{2}{5}$$

The sum

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

Adding two fractions of different denominators

Step 1



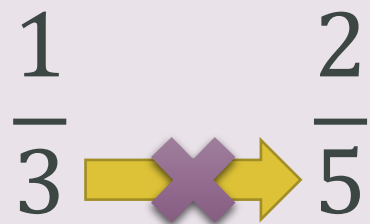
Multiply the numerator of each fraction by the denominator of the other, then add them together

$$\begin{aligned} 1 \times 5 &= 5 \\ 2 \times 3 &= 6 \end{aligned}$$

$$5 + 6 = 11$$

This will form the answer numerator

Step 2



Multiply the two denominators together

$$3 \times 5 = 15$$

This will form the answer denominator

The answer

$$\frac{1}{3} + \frac{2}{5} = \frac{11}{15}$$

The two step



1

Step 1 – multiply
numerators to denominators
and add together



2

Step 2 – multiply the
denominators together

All together again

The Sum: consider the sum

- Consider the sum
- $\frac{1}{3} + \frac{2}{5}$
- Two different denominators

Step 1: the answer numerator

- Multiply each of the numerators with each of the denominators
- $1 \times 5 = 5$
- $2 \times 3 = 6$
- Add these together
- $5 + 6 = 11$

Step 2: the answer denominator

- Multiply the denominators
- $3 \times 5 = 15$

The Answer: all together

- Put the answer from step 1 (the numerator) on the top
- Put the answer from step 2 (the denominator) on the bottom
- $\frac{11}{15}$