



Mmm ... doughnuts

adding fractions with like denominators

Let's say you have a doughnut

Yum!



and you eat $\frac{1}{2}$ of it



Now you only have $\frac{1}{2}$ a doughnut



Your cousin has $1\frac{1}{2}$ doughnuts, and you're feeling kind of full, so you give her your half of a doughnut



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

What if both you and your cousin had $1\frac{1}{2}$ doughnuts?



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



Adding fractions

with like denominators

What's a like denominator ?

“Like denominators”

means the bottom numbers in the fractions you are adding are the same, like this:

- $\frac{1}{4} + \frac{3}{4}$

and they are NOT like this

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



Adding fractions

Fractions that have LIKE denominators are added exactly the same as whole numbers

$$1 + 1 = 2$$

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

Fractions that equal whole numbers

Whenever the numerator (top) and denominator (bottom) are equal, the fraction equals 1

$$\frac{4}{4} = 1$$

$$\frac{9}{9} = 1$$

Fractions that equal 1, in doughnuts



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

WHAT ARE MIXED NUMBERS?

and how to add them



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

$$6\frac{4}{7}$$

$$3\frac{2}{3}$$

A mixed number

includes a whole number and a fraction

How to add mixed numbers

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

1. Add the fractions $\frac{1}{3} + \frac{2}{3} = 1$
2. Add the whole numbers $1+2 = 3$
3. Add your results from the first two steps $1 + 3 = 4$

$$1\frac{1}{3} + 2\frac{2}{3} = 4$$



Two more points to know

You can switch the steps around and it still works $1\frac{1}{3} + 2\frac{2}{3}$

1. Add the whole numbers $1+2 = 3$

2. Add the fractions $\frac{1}{3} + \frac{2}{3} = 1$

3. Add your results from the first two steps $3 + 1 = 4$

$$1\frac{1}{3} + 2\frac{2}{3} = 4$$

Still

SOMETIMES THE MIXED NUMBERS ADD UP TO ANOTHER MIXED NUMBER

It doesn't matter. You still find the answer the same way

Sometimes the fractions add up to a mixed number

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

1. Add the fractions $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$
2. Add the whole numbers $1+1 = 2$
3. Add your results from the first two steps $\frac{2}{3} + 2 = 2\frac{2}{3}$

Mixed numbers, in doughnuts

Your doughnuts = $1\frac{1}{3}$



Cousin's doughnuts = $1\frac{1}{3}$



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