Welcome
to
Multiplying Fractions

Standard:
MGSE4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number

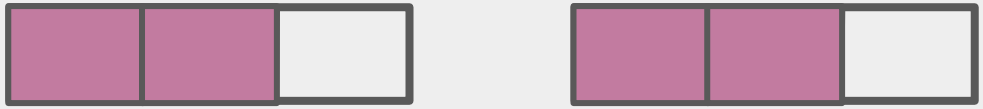
Today, we will show you how 4th grade students multiply whole numbers by a fraction using a model and the operation.

We teach our students that when we multiply, it means equal groups.

2 x 2/3 would mean 2 groups of 2/3.

Let's look at a model of 2 groups of 2/3 .

2 x 2/3 would mean 2 groups of 2/3.



$\frac{2}{3}$

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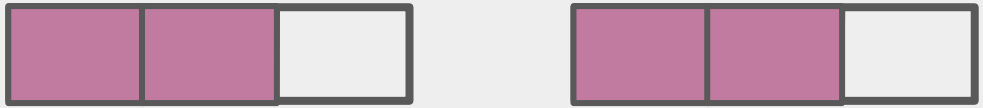
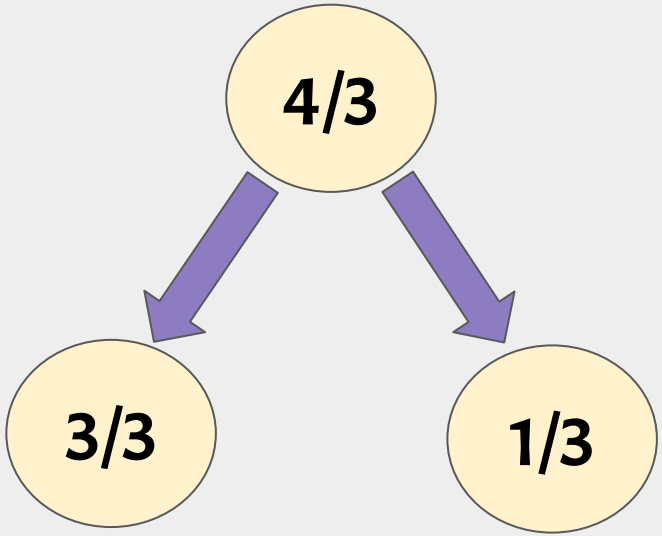


$$\frac{2}{3} + \frac{2}{3} = \frac{4}{3}$$

We know that 4/3 is greater than a whole. So we can decompose to find the answer.

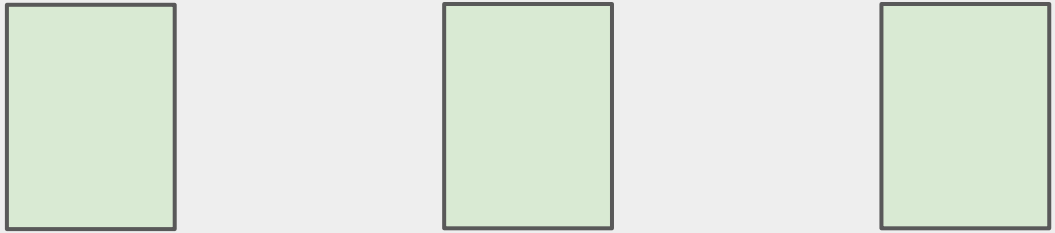
We pull out the whole - 3/3.



We can see that our answer is 1 1/3 .

After we show them how we get the product with a model, then we teach them to use the operation.

First, we review with them how to write a whole number as a fraction.

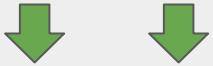


This model shows 3 wholes. This can also be written as

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

So if we are multiplying 3 x 2/4, we can use 3/1 for the whole number.

$$3 \times \frac{2}{4}$$



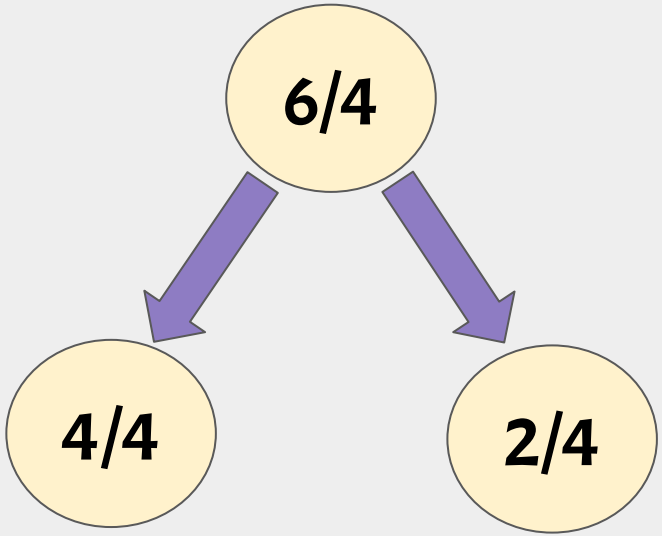
$$\frac{3}{1} \times \frac{2}{4} =$$

Now, just like we have done before, we can multiply straight across.

$$\frac{3}{1} \times \frac{2}{4} = \frac{6}{4}$$

6/4 is greater than a whole, so we can decompose to find the answer.

We pull out the whole - 4/4.

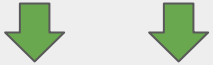


We can see that our answer is 1 2/4 .

Another example:

So if we are multiplying 4 x 2/6, we can use 4/1 for the whole number.

$$4 \times \frac{2}{6}$$



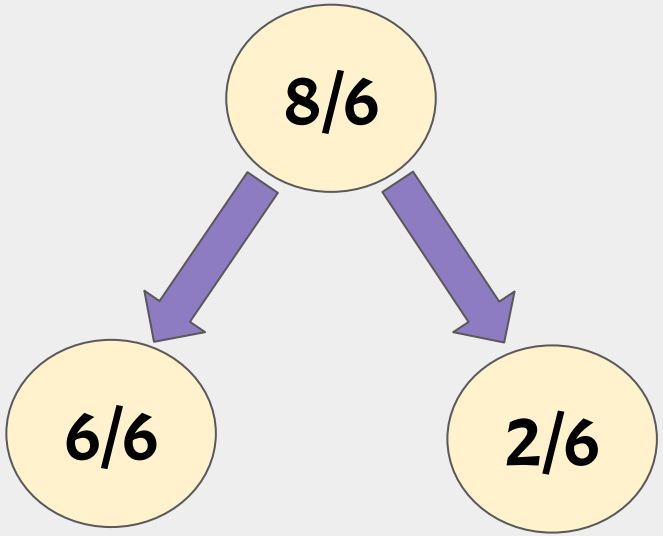
$$\frac{4}{1} \times \frac{2}{6} =$$

Now, just like we have done before, we can multiply straight across.

$$\frac{4}{1} \times \frac{2}{6} = \frac{8}{6}$$

8/6 is greater than a whole, so we can decompose to find the answer.

We pull out the whole - 6/6.



We can see that our answer is 1 2/6 .

Mark your calendars!

- February 3 @ 1:45 : Parent Milestone Zoom
- February 21-22 : Student Holiday
- March 28 - April 1 : Spring Break
- April 28 & 29 : Math Milestone
- May 2-4 : ELA Milestone