



LET'S BUILD WITH FRACTIONS!

Your Journey to Becoming a Fraction Master Builder

OUR BUILDER'S MISSION

What are fractions?
They're just a way to talk about equal parts of a whole thing.



To become a Master Builder, we need to understand how pieces fit together. That's what fractions are all about! Are you ready for the challenge?



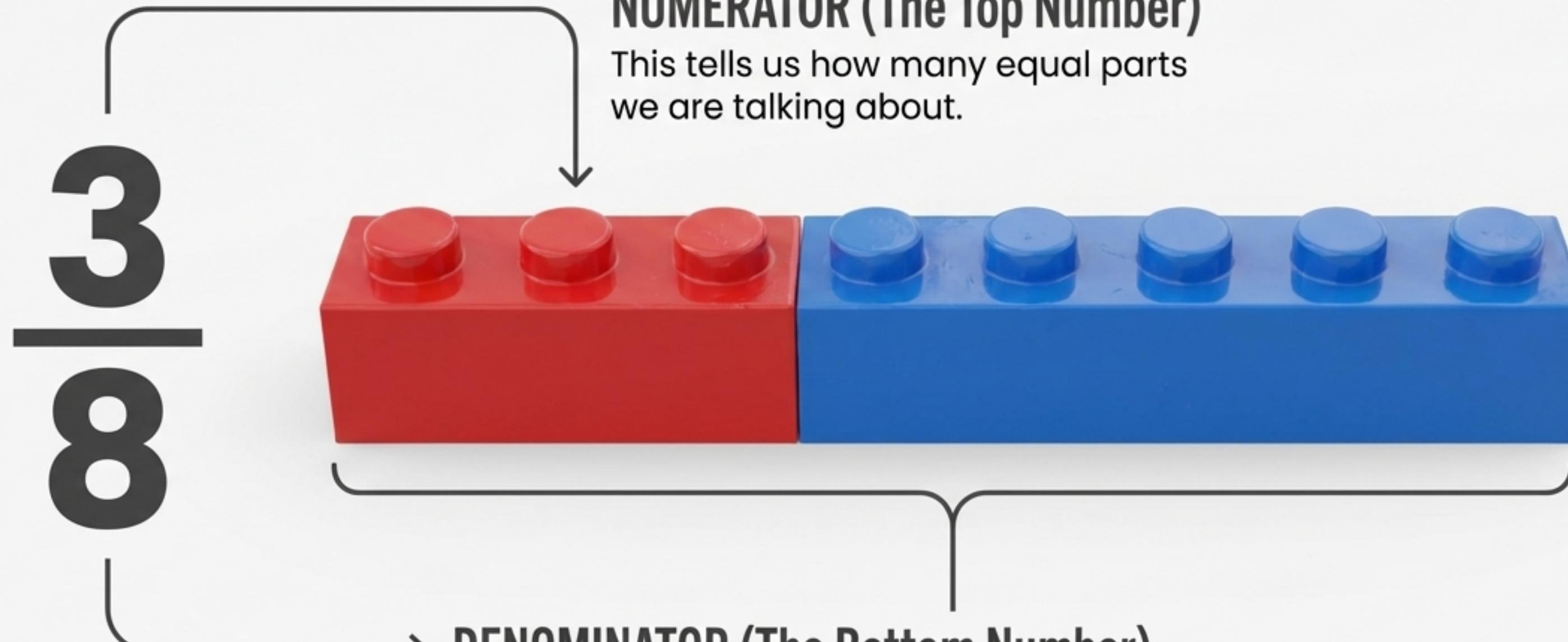
EVERY BUILD STARTS WITH A WHOLE



In fractions, the 'whole' is the entire thing we start with.
It could be one pizza, one chocolate bar, or...

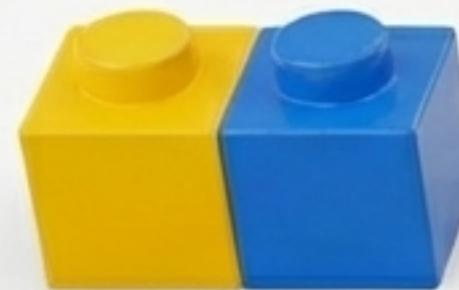
Our 'whole' will be one LEGO baseplate or one complete LEGO brick.

READING THE BUILDING PLANS



This tells us how many equal parts the whole is divided into.

THE SINGLE STUD: UNIT FRACTIONS



$1/2$



$1/4$



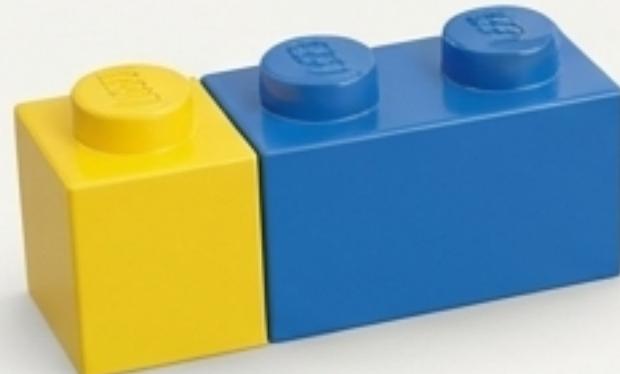
$1/8$

A **unit fraction** is any fraction where the numerator is 1.
It represents one single part of the whole.



Key Insight: Notice how the piece gets smaller as the denominator gets bigger? That's because the whole is being split into more and more pieces!

BUILDER CHALLENGE #1: SIZE CHECK!



1/3



1/5

Ahmed has a $\frac{1}{3}$ LEGO brick. Sara has a $\frac{1}{5}$ LEGO brick.
Who has the bigger piece?



Ahmed's piece is bigger! When you split a whole into only 3 parts, each part is larger than if you split it into 5 parts.

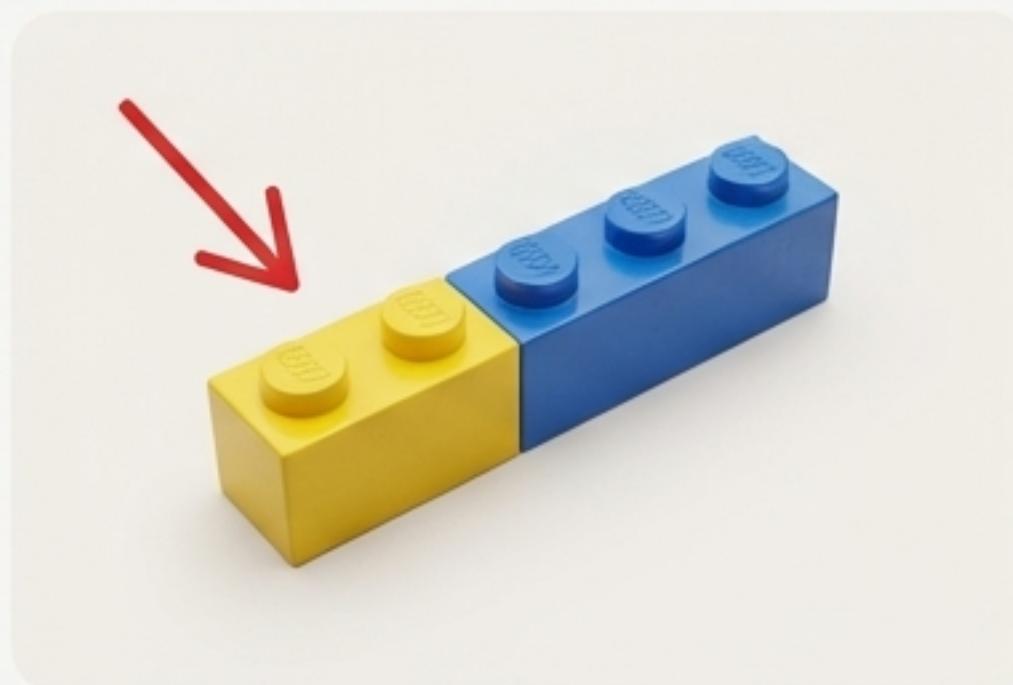
BUILDING WITH MORE THAN ONE PIECE

What if we want to talk about more than one part? That's a **non-unit fraction**.

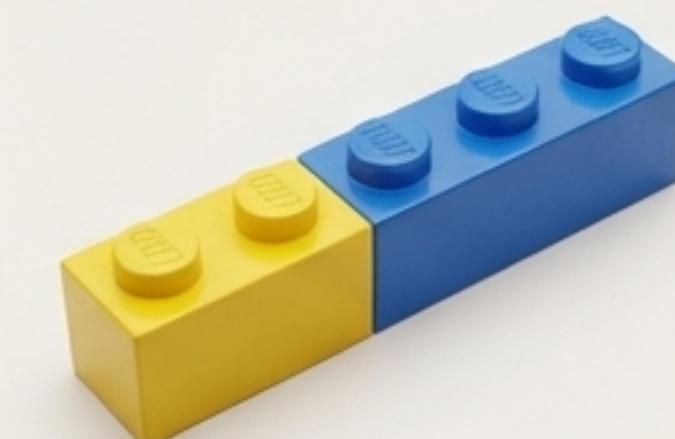
BUILD IT



SEE IT



WRITE IT

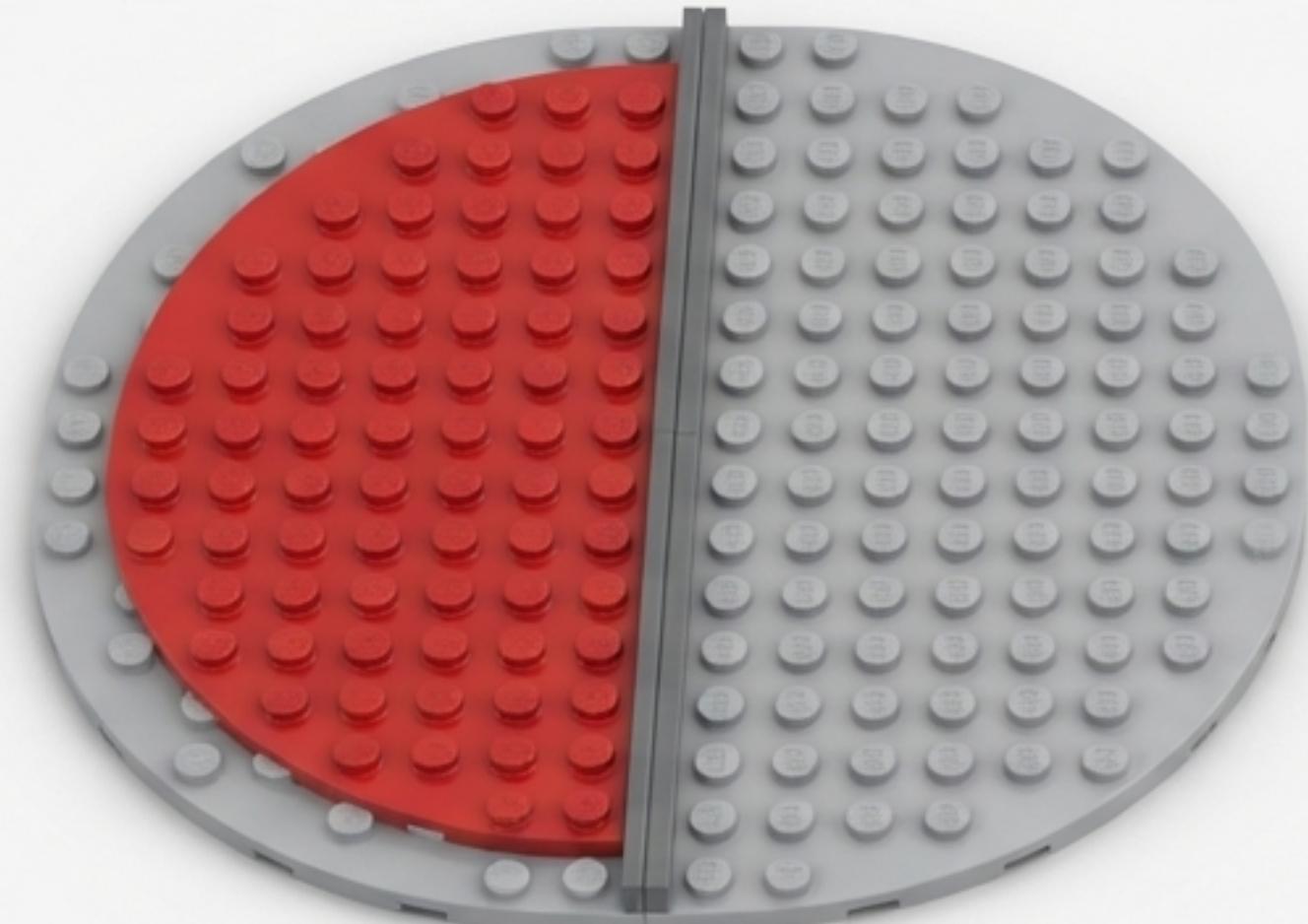


$$\frac{2}{5}$$

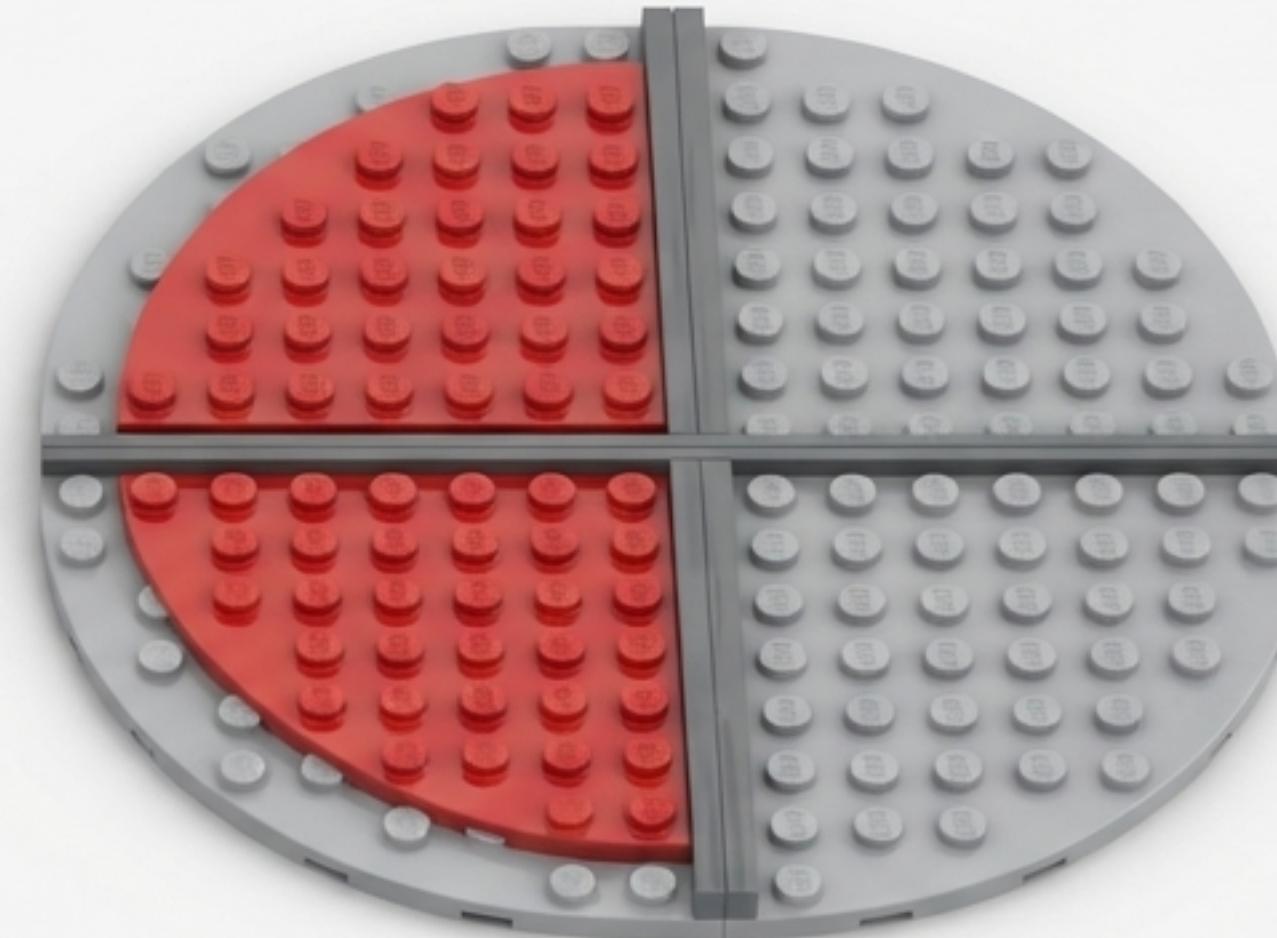


We have a brick with 5 equal parts (the denominator). We are looking at the 2 yellow parts (the numerator). So, we have $\frac{2}{5}$ of the brick!

DIFFERENT BRICKS, SAME SIZE!



$1/2$



$2/4$

Sara says, "I ate $1/2$ of a pizza and my friend ate $2/4$. My friend ate more because 2 is bigger than 1!" Is she correct?



No! As you can see from our LEGO build, $1/2$ is exactly the same size as $2/4$. They are **equivalent fractions**.

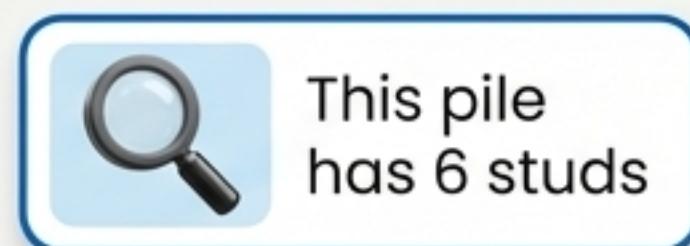
MASTER SKILL: FRACTIONS OF A COLLECTION

Builder Challenge: Ben has 48 sweets. He gives $\frac{3}{8}$ of them to his brother. How many sweets did his brother get?

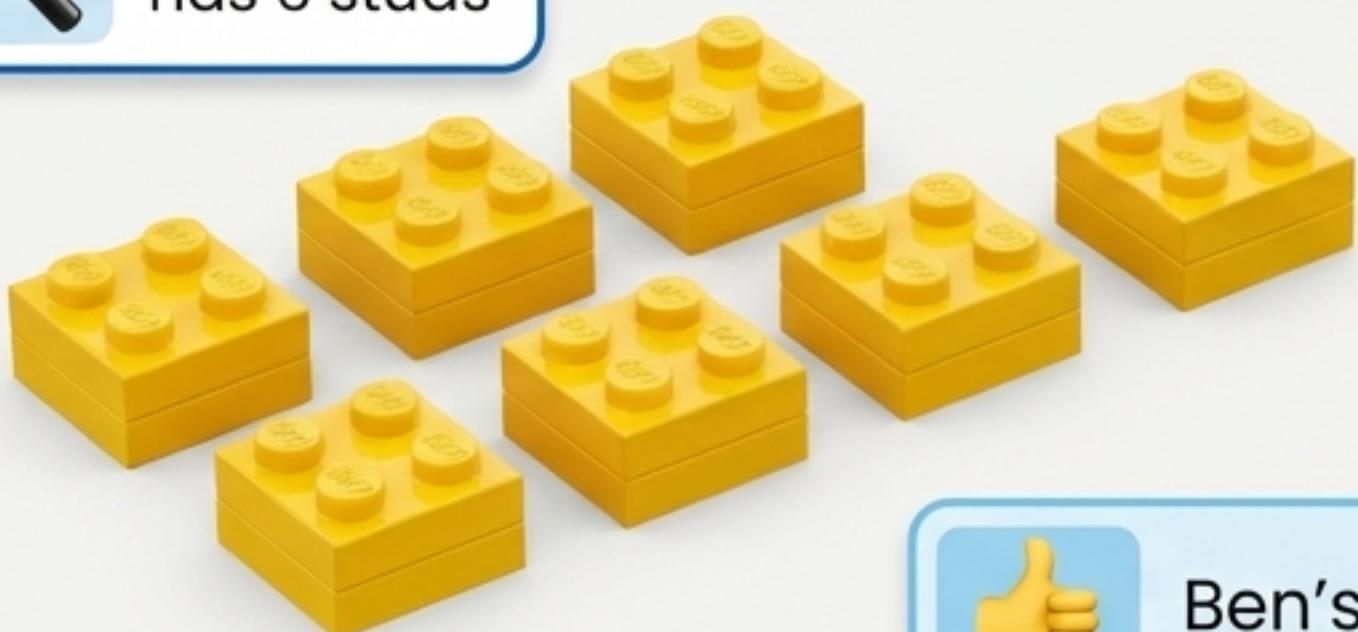


Step 1: Divide by the Denominator

First, we share the 48 studs into 8 equal groups (because 8 is the denominator).



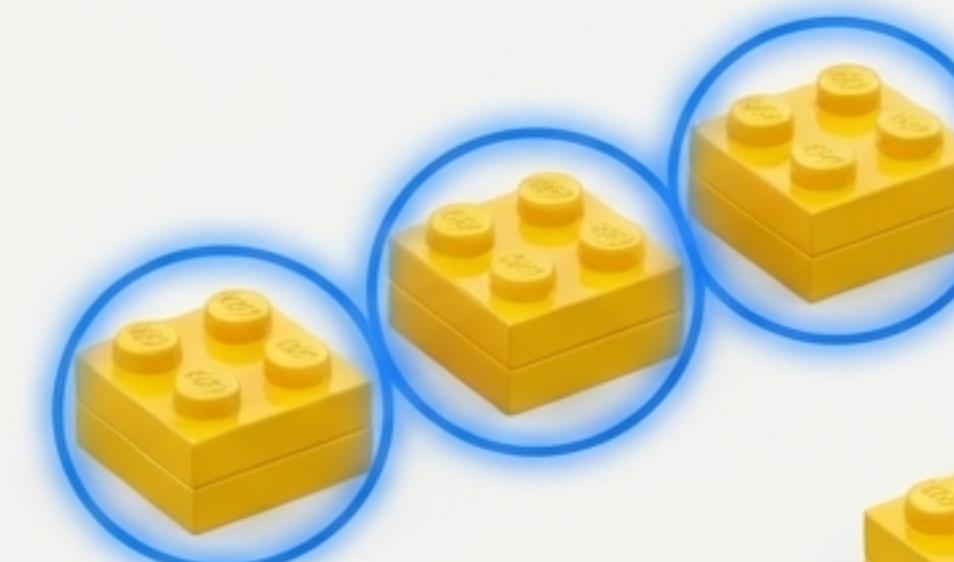
$$48 \div 8 = 6$$



Ben's brother got 18 sweets!

Step 2: Multiply by the Numerator

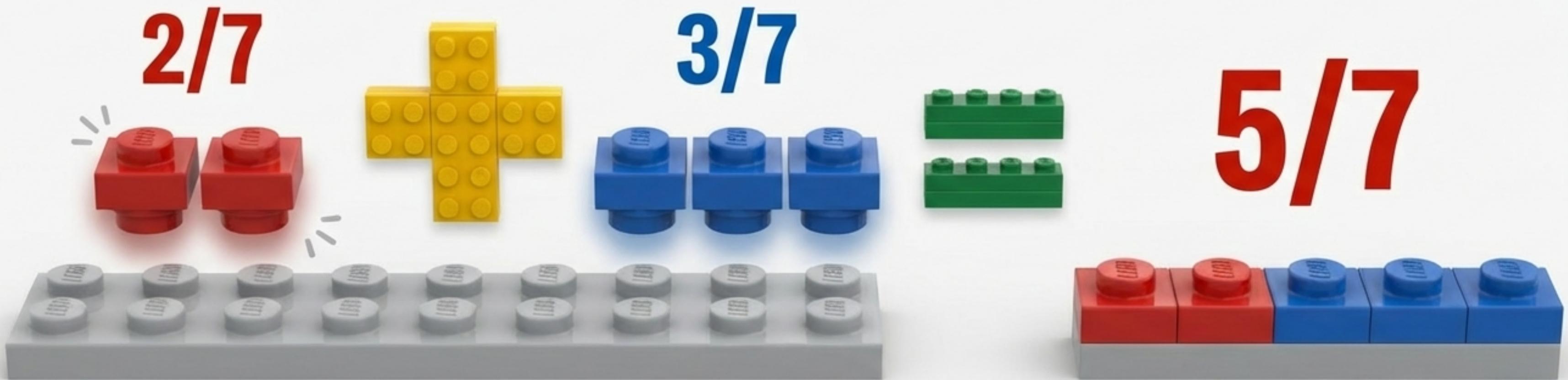
Now, we need 3 of those groups (because 3 is the numerator).



$$6 \times 3 = 18$$



COMBINING YOUR BUILDS: ADDING FRACTIONS



$$2/7 + 3/7 = 5/7$$

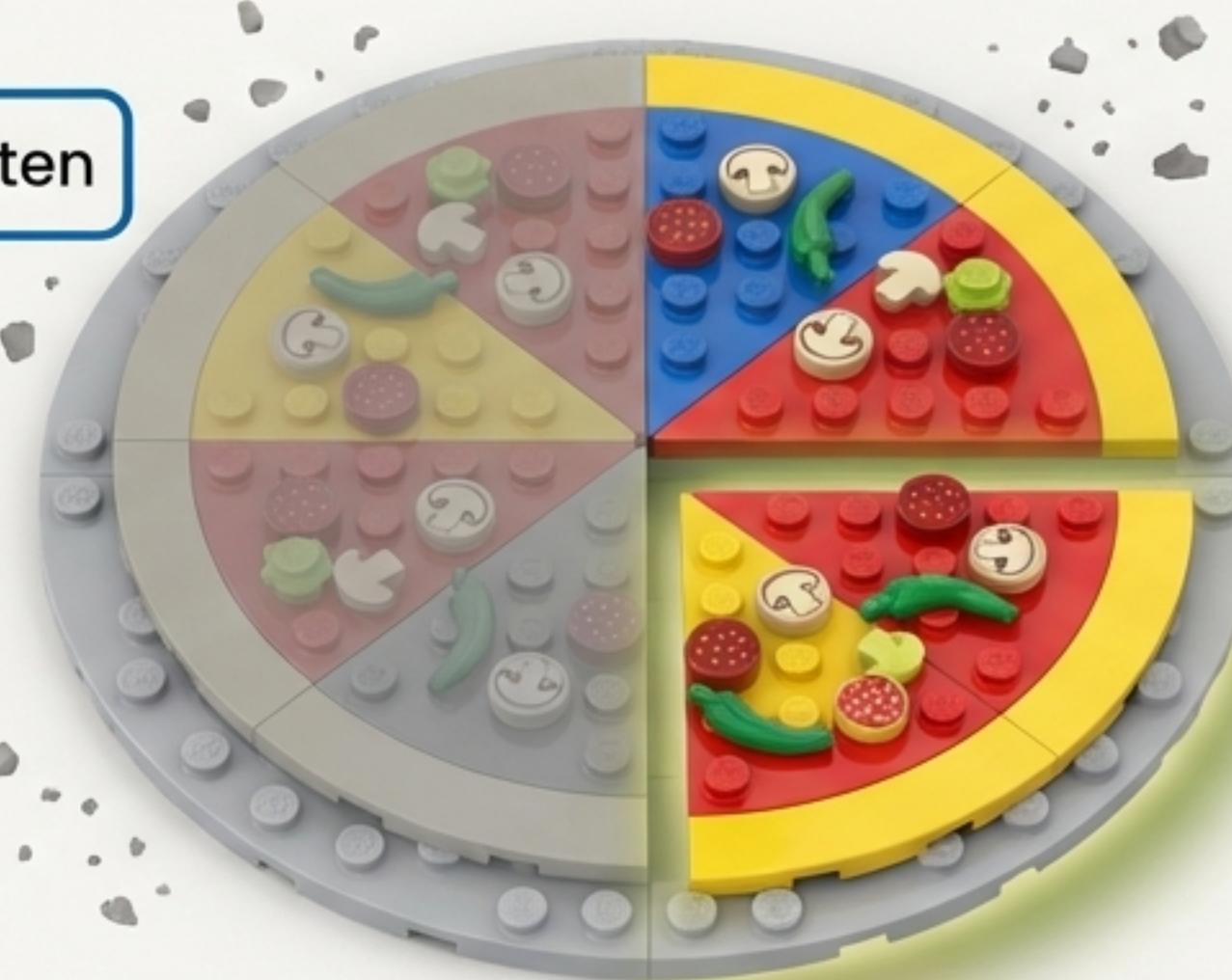


When we add fractions, we only add the numerators (the top numbers). The denominator stays the same because the size of the whole baseplate didn't change!

BUILDER CHALLENGE #2: THE PIZZA PARTY!

Hamza and Khalifa shared a pizza. Hamza ate two fourths ($\frac{2}{4}$) of the pizza and Khalifa ate one fourth ($\frac{1}{4}$). How much pizza was left?

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

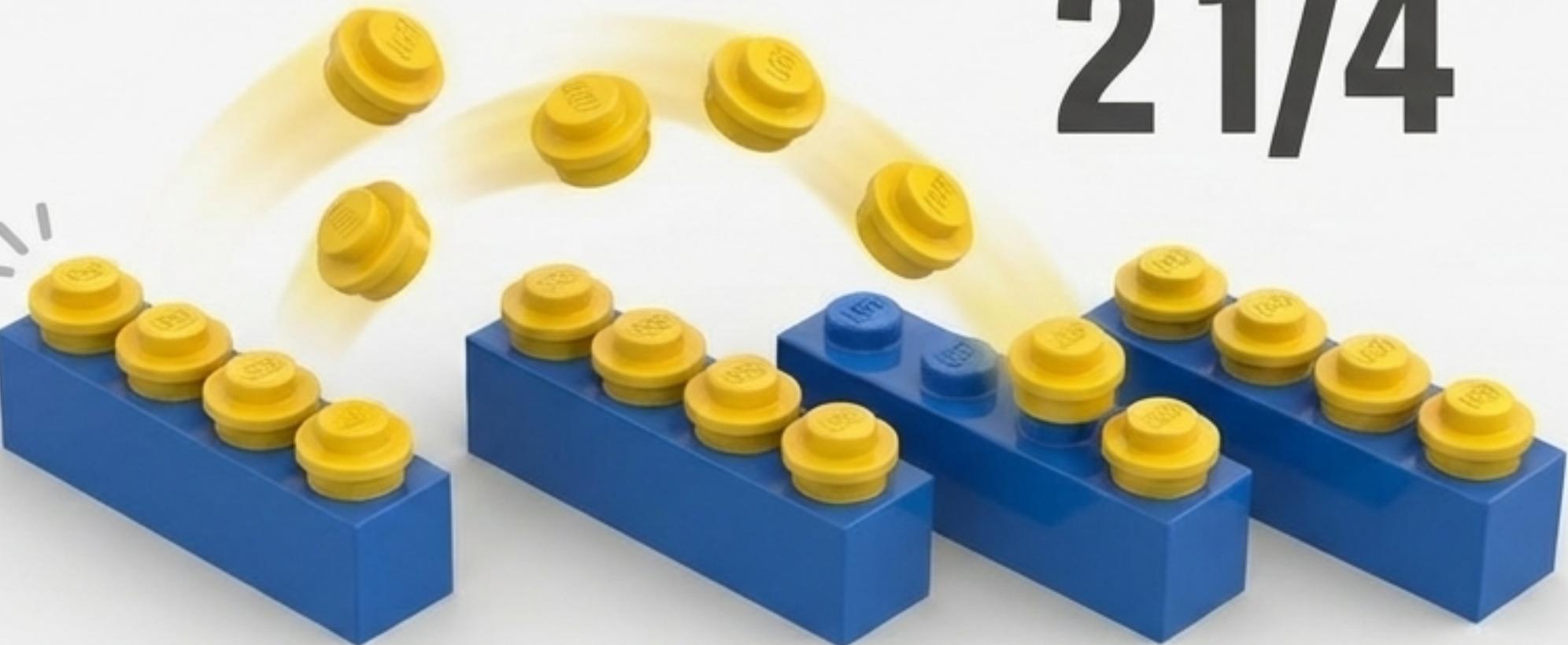


$$\frac{4}{4} - \frac{3}{4} = \frac{1}{4} \text{ left}$$

There is $\frac{1}{4}$ of the pizza left!

BONUS LEVEL: BUILDING BEYOND THE WHOLE!

9/4



Sometimes you have more parts than one whole! An **improper fraction** (like 9/4) can be built as a **mixed number** (like 2 and 1/4).

Frankie's Tip:

"Just see how many whole bricks you can fill up, and then count the leftover pieces!"

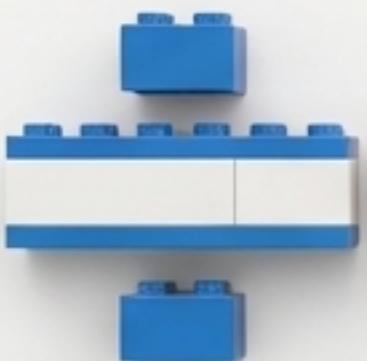
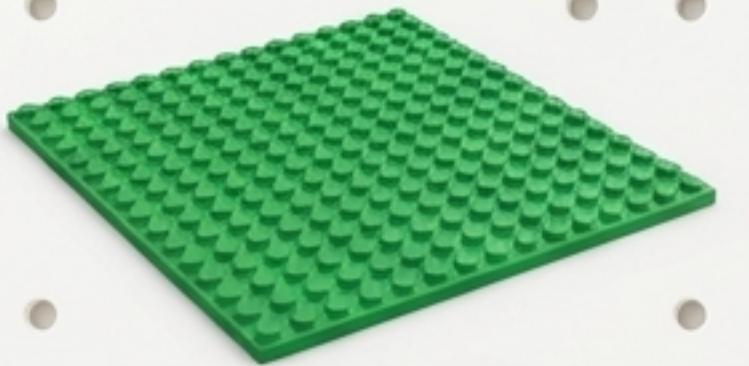




YOU'RE A YOU'RE A FRACTION MASTER BUILDER!

You used the building blocks of fractions to solve challenges and create amazing things. Great work!

YOUR MASTER BUILDER TOOLKIT



The **Whole** is your starting baseplate.

The **Denominator** is the total number of equal parts.

The **Numerator** is how many parts you are counting.

To find a fraction of an amount:
Divide by the bottom, then multiply by the top!