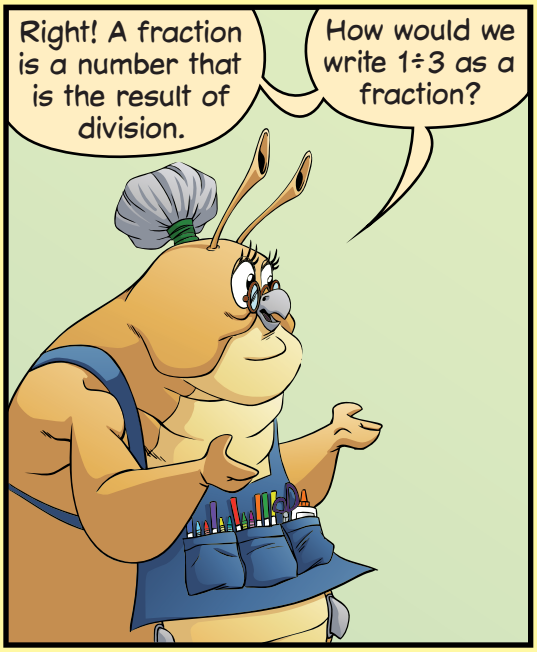
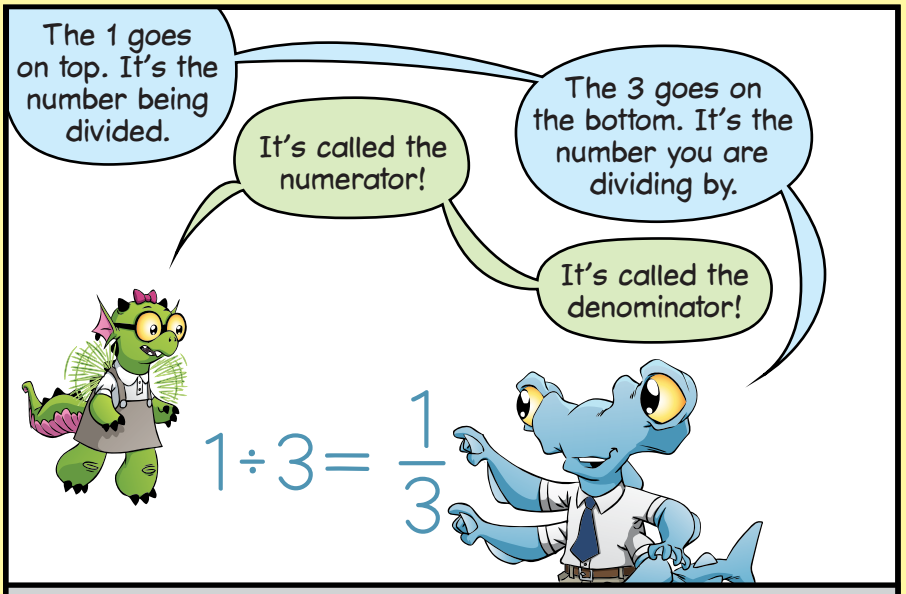
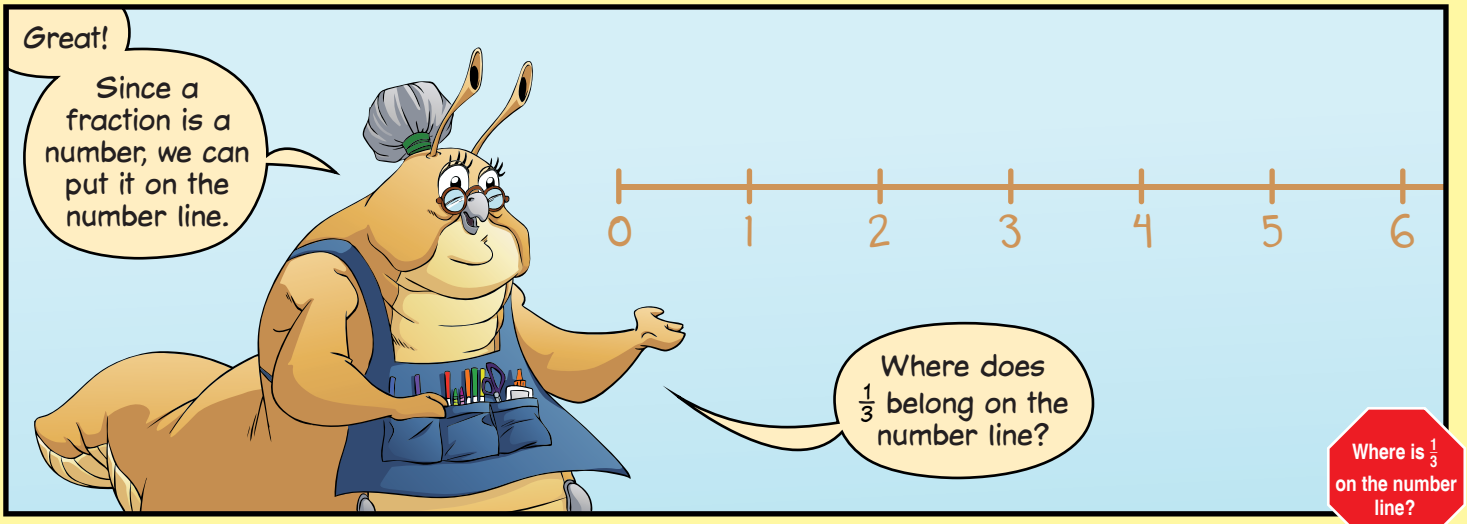
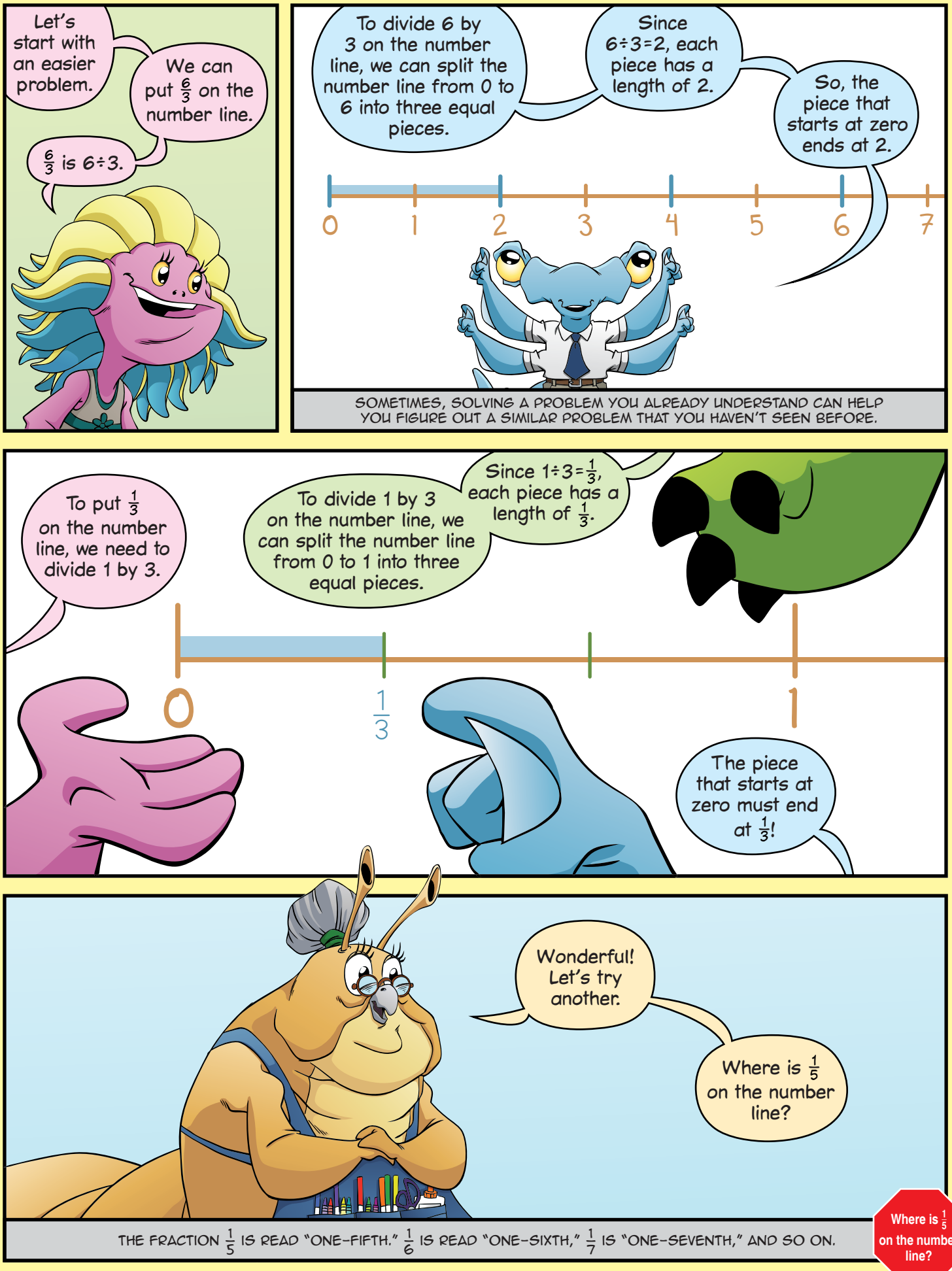




THE FRACTION $\frac{1}{3}$ IS CALLED "ONE-THIRD" AND CAN ALSO BE WRITTEN 1/3.

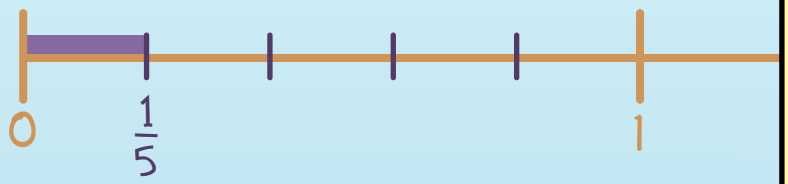



Let's start with an easier problem.
We can put $\frac{6}{3}$ on the number line.
$\frac{6}{3}$ is $6 \div 3$.
To divide 6 by 3 on the number line, we can split the number line from 0 to 6 into three equal pieces.
Since $6 \div 3 = 2$, each piece has a length of 2.
So, the piece that starts at zero ends at 2.
0 1 2 3 4 5 6 7
SOMETIMES, SOLVING A PROBLEM YOU ALREADY UNDERSTAND CAN HELP YOU FIGURE OUT A SIMILAR PROBLEM THAT YOU HAVEN'T SEEN BEFORE.
To put $\frac{1}{3}$ on the number line, we need to divide 1 by 3.
To divide 1 by 3 on the number line, we can split the number line from 0 to 1 into three equal pieces.
Since $1 \div 3 = \frac{1}{3}$, each piece has a length of $\frac{1}{3}$.
0
$\frac{1}{3}$
1
The piece that starts at zero must end at $\frac{1}{3}$!
Wonderful! Let's try another.
Where is $\frac{1}{5}$ on the number line?
THE FRACTION $\frac{1}{5}$ IS READ "ONE-FIFTH." $\frac{1}{6}$ IS READ "ONE-SIXTH," $\frac{1}{7}$ IS "ONE-SEVENTH," AND SO ON.
Where is $\frac{1}{5}$ on the number line?

When we found $\frac{1}{3}$, we split the number line between 0 and 1 into three equal pieces.

So, to find $\frac{1}{5}$, we can split the number line between 0 and 1 into ***five*** equal pieces.

The first piece begins at zero and ends at $\frac{1}{5}$!

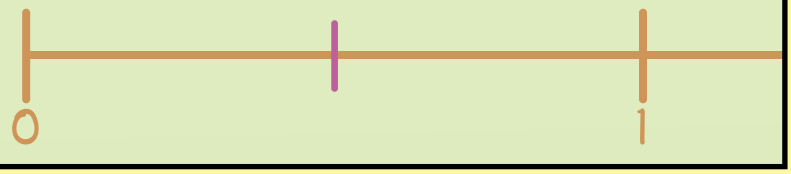


Excellent. Try one more. Locate $\frac{1}{16}$ on the number line.

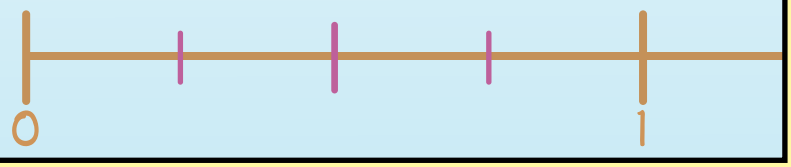
We need to split the number line between 0 and 1 into ***sixteen*** equal pieces.

That's hard!

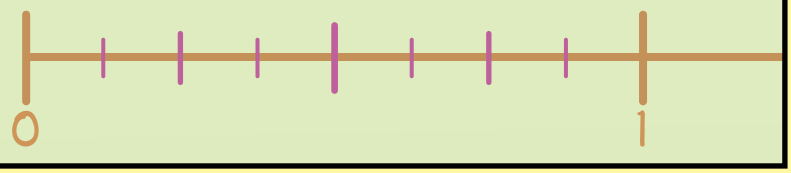
If we add one line exactly between 0 and 1, we get two equal pieces.



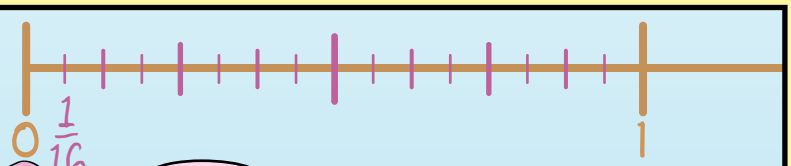
If we put a line in the middle of each of those, we get $2 \times 2 = 4$ pieces.



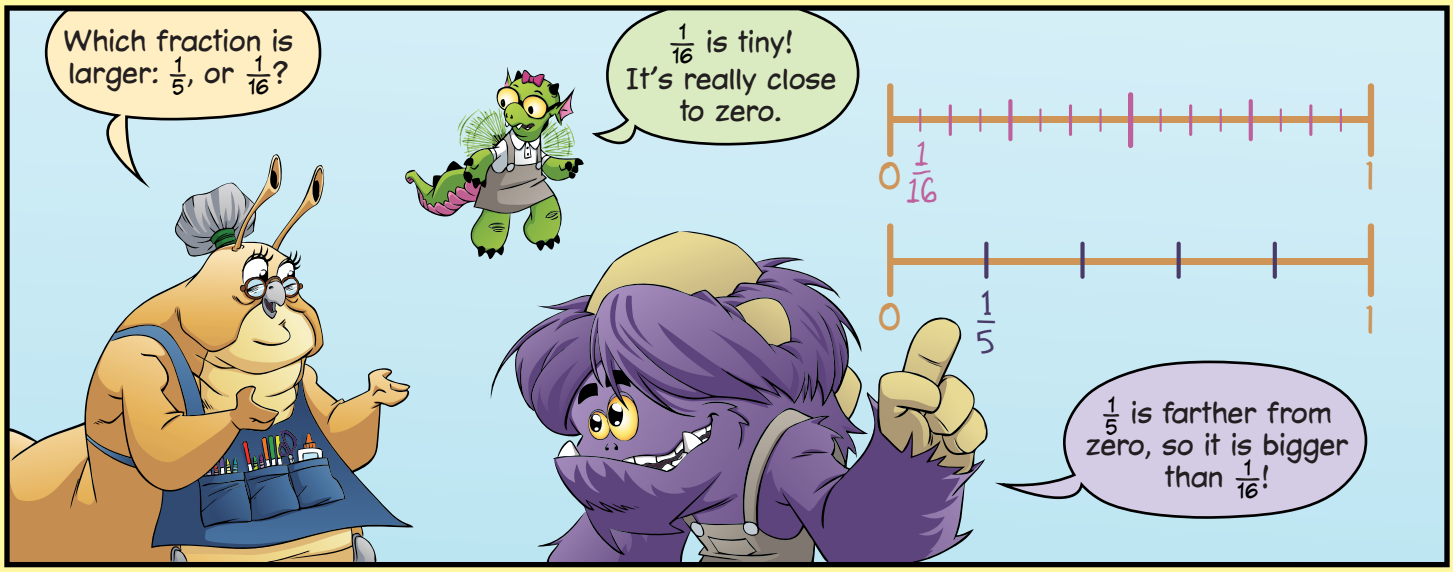
Splitting each of those down the middle gives us $4 \times 2 = 8$ pieces.

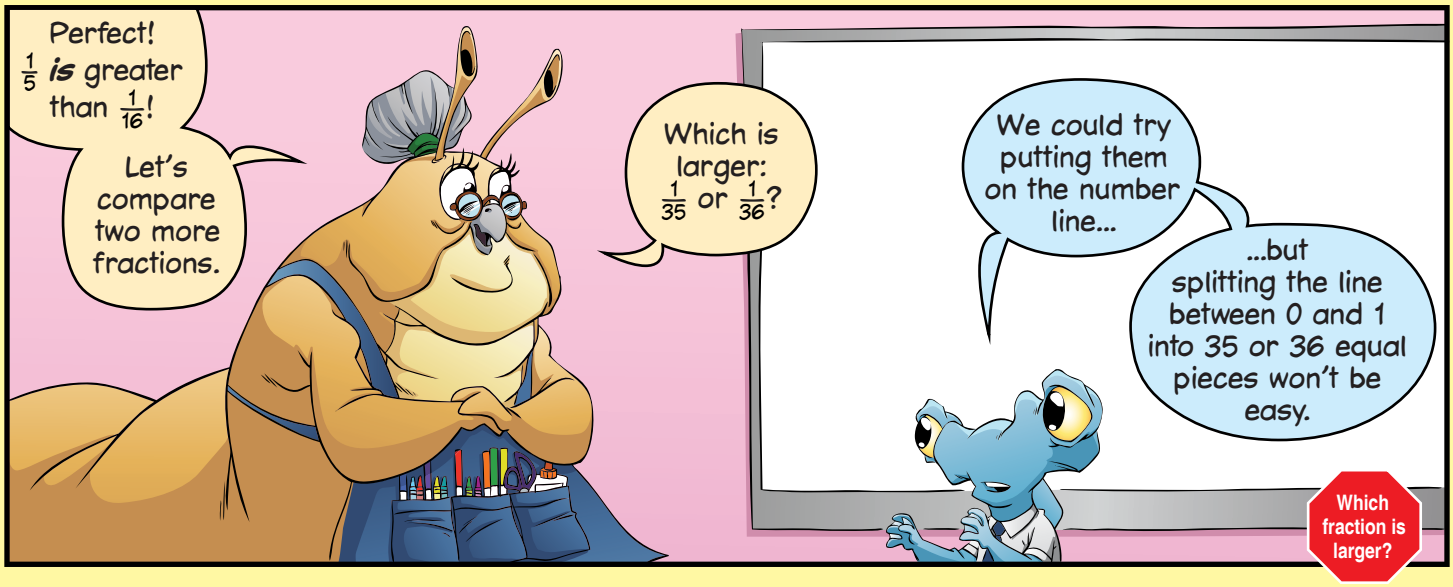


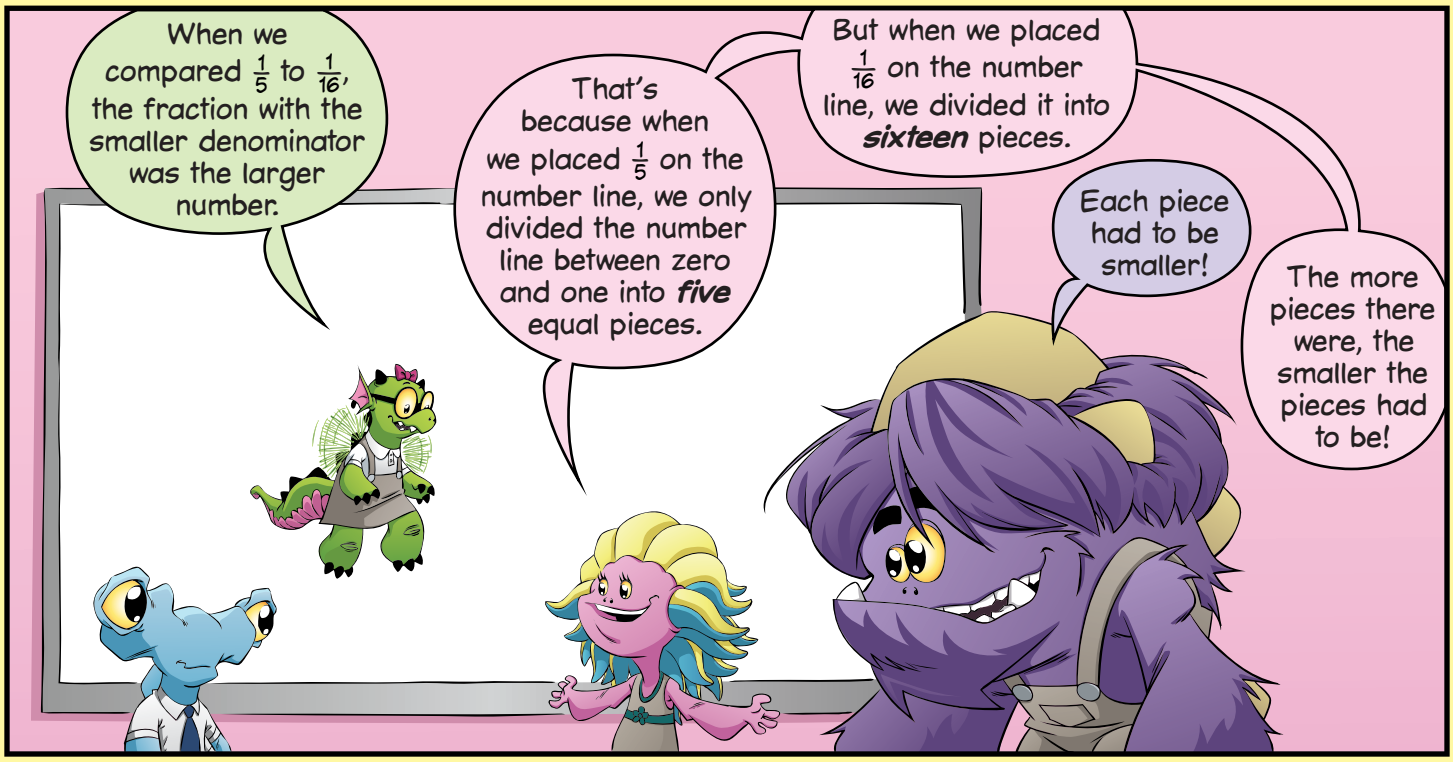
And if we do it one more time, we get $8 \times 2 = 16$ equal pieces.

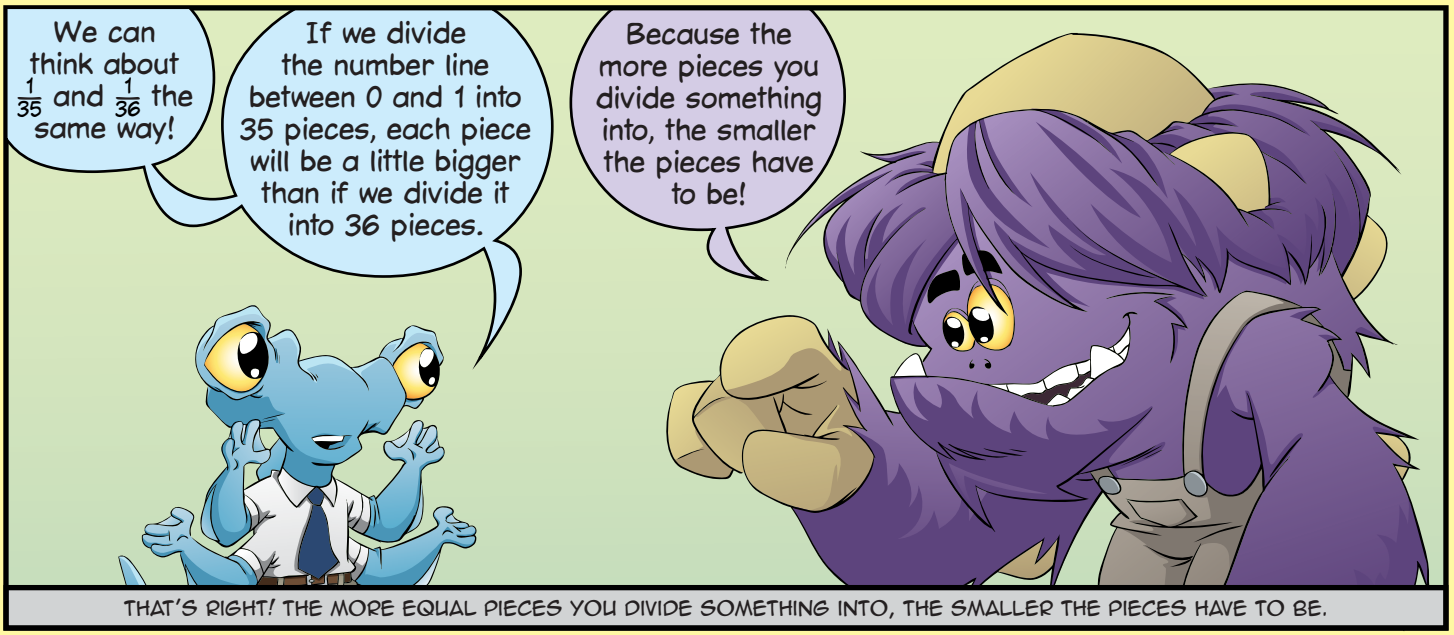


$\frac{1}{16}$ is right here.

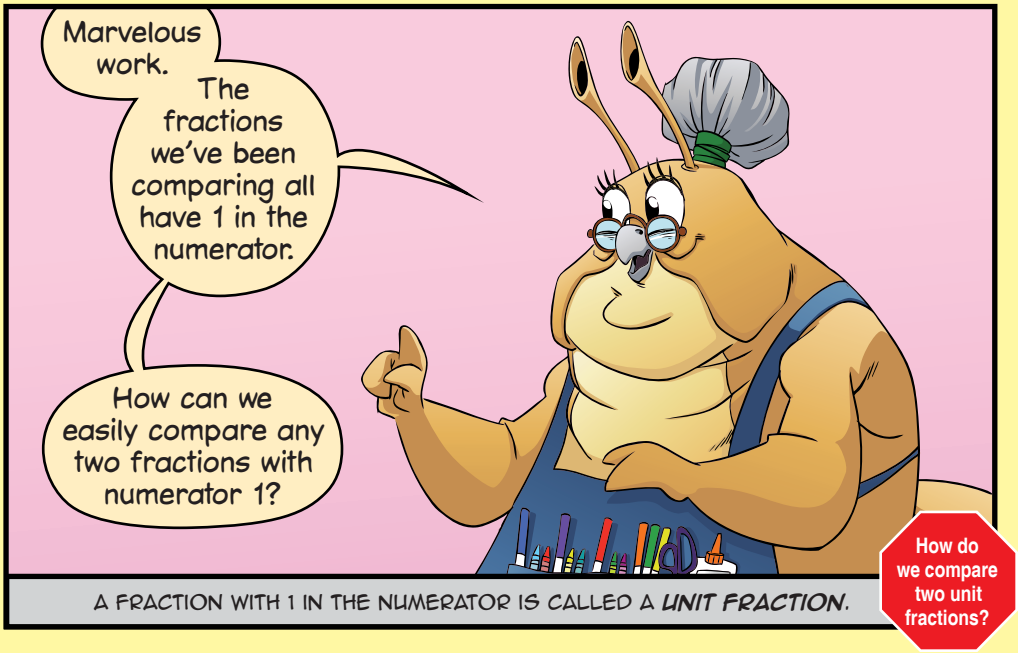

Which fraction is larger: 1/5, or 1/16?
1/16 is tiny! It's really close to zero.
0
1/16
1
0
1/5
1
1/5 is farther from zero, so it is bigger than 1/16!

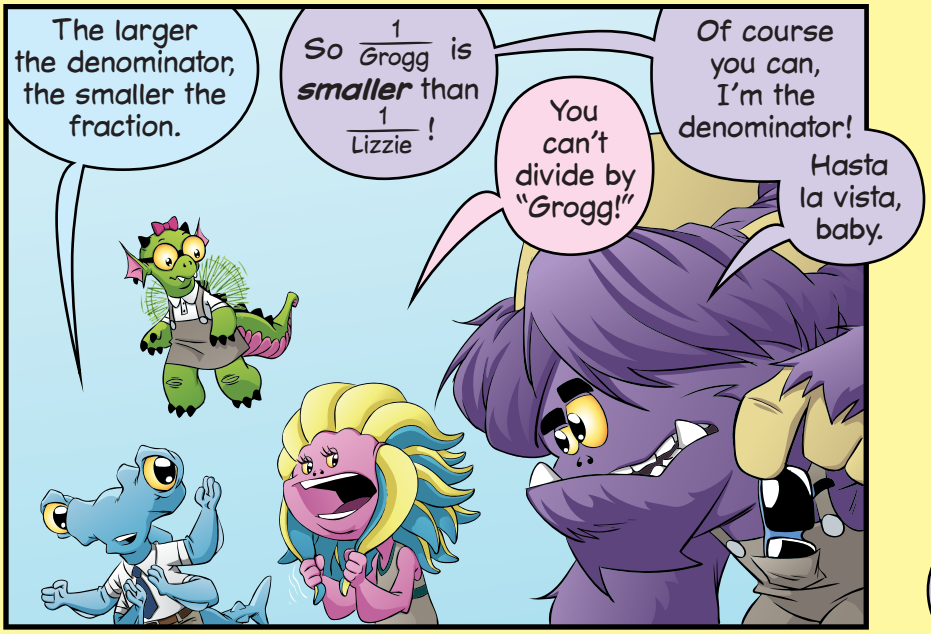

Perfect! 1/5 is greater than 1/16!
Let's compare two more fractions.
Which is larger: 1/35 or 1/36?
We could try putting them on the number line...
...but splitting the line between 0 and 1 into 35 or 36 equal pieces won't be easy.
Which fraction is larger?


When we compared 1/5 to 1/16, the fraction with the smaller denominator was the larger number.
That's because when we placed 1/5 on the number line, we only divided the number line between zero and one into five equal pieces.
But when we placed 1/16 on the number line, we divided it into sixteen pieces.
Each piece had to be smaller!
The more pieces there were, the smaller the pieces had to be!


We can think about $\frac{1}{35}$ and $\frac{1}{36}$ the same way!
If we divide the number line between 0 and 1 into 35 pieces, each piece will be a little bigger than if we divide it into 36 pieces.
Because the more pieces you divide something into, the smaller the pieces have to be!
THAT'S RIGHT! THE MORE EQUAL PIECES YOU DIVIDE SOMETHING INTO, THE SMALLER THE PIECES HAVE TO BE.


So, $\frac{1}{35}$ is a little bigger than $\frac{1}{36}$!


Marvelous work.
The fractions we've been comparing all have 1 in the numerator.
How can we easily compare any two fractions with numerator 1?
A FRACTION WITH 1 IN THE NUMERATOR IS CALLED A *UNIT FRACTION*.
How do we compare two unit fractions?


The larger the denominator, the smaller the fraction.
So $\frac{1}{\text{Grogg}}$ is ***smaller*** than $\frac{1}{\text{Lizzie}}$!
You can't divide by "Grogg!"
Of course you can, I'm the denominator!
Hasta la vista, baby.
I'll be back!