

Division: The Standard Algorithm

When dividing, in our banker and boss game we have arrived at the method of splitting things up starting with our biggest denominations. When we can't split those up evenly, we ungroup those into smaller pieces, and split those up, and so on and so forth. The standard algorithm for long division works the same way.

32 ÷ 2 =	32 ÷ 2 =
<p>3 tens 2 ones</p> <p>Split in 2 equal groups</p>	$\begin{array}{r} 2 \overline{) 32} \end{array}$
<p>I look at my largest denominations (tens) and split those up as I can evenly into 2 groups</p>	$\begin{array}{r} 1 \\ 2 \overline{) 32} \\ \underline{2} \end{array}$
<p>I have handed out two tens, so I still have one left, which I will have to ungroup to divide. I ungroup it into 10 ones. Now I have a total of 12 ones because I had 2 from before.</p>	$\begin{array}{r} 1 \\ 2 \overline{) 32} \\ \underline{2} 12 \end{array}$
<p>Next I distribute these 12 ones among my two groups. I know that 12 divided by 2 is 6 because 2 x 6 is 12. So I can put 6 ones in each group.</p> <p>I have divided a total of 12 ones, so I have nothing left over to divide. I am finished.</p>	<p>amount per group → 16</p> $\begin{array}{r} 16 \\ 2 \overline{) 32} \\ \underline{20} \\ 12 \\ \underline{12} \\ 0 \end{array}$ <p>← ONES!!!</p>
$32 \div 2 = 16$	