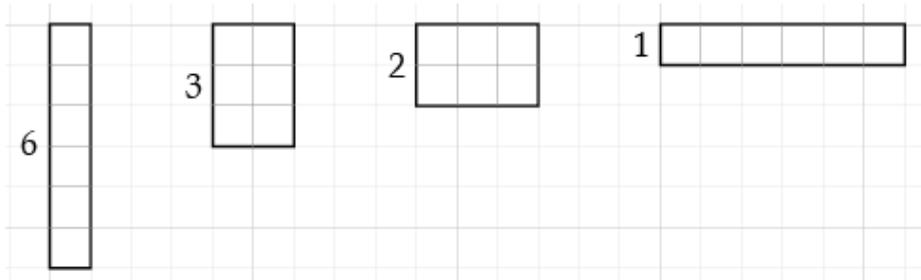


These rectangles represent 6 divided by 6, 3, 2, and 1:



As the divisor gets smaller, the quotient gets bigger. (In fact, we see that when we divide the divisor by n , we multiply the quotient by n .) Continuing that process, we represent the division of 6 by 1 , $\frac{1}{2}$, and $\frac{1}{3}$:



The quotient continues to get bigger, and in fact in order for the area to still be 6, we see that when we divide 6 by $1/n$, the quotient must be 6 times n . This makes sense, as it continues the pattern we saw above.

We conclude that *to divide by a unit fraction, multiply by its reciprocal*.

But what if we are dividing by, say, $\frac{2}{3}$? Since we are multiplying the divisor by 2 (as compared to 6 divided by $\frac{1}{3}$), we have to divide the quotient by 2:



So to divide 6 by m/n , we multiplied by n , and divided by m , which amounts to multiplying by n/m .

In short: *to divide by a fraction, multiply by its reciprocal*.