

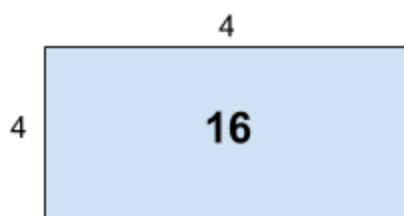
Area Model Division

How to use an Area Model to divide: $18 \div 4$.

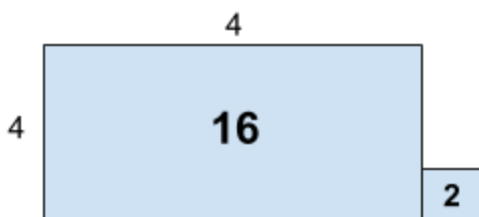
1) Create a rectangle with the divisor as the side width.



2) Find the closest multiple of 4 to the dividend of **18**: 4,8,12,**16**. Your first rectangle will have a length of 4 and an area of 16. The length is the quotient $16 \div 4 = 4$.

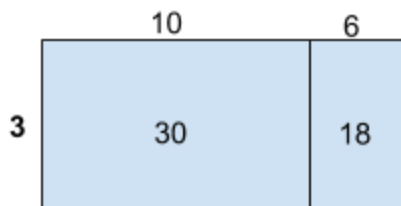


3) Subtract the area of your first area model from the dividend. $18 - 16 = 2$. Create an attached smaller rectangle with an area of 2. This is the remainder.

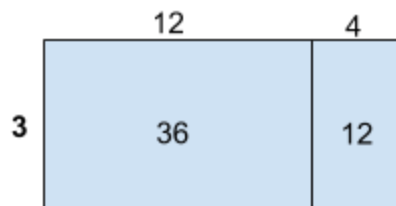


4) **Quotient = 4; Remainder = 2** or $4\frac{2}{4}$ or $4\frac{1}{2}$ or 4.5.

When the dividend is larger than a memorized multiple like $48 \div 3$. Choose the closest multiple of 3 to the dividend 48 you know. One tip is to always choose multiples of ten ($3 \times 10 = 30$). They are easy to find and easy to mentally subtract. You can choose to decompose the dividend into any multiple you want to find partial quotients. Finally, add your partial quotients for your final quotient.



Quotient = $10 + 6 = 16$



Quotient = $12 + 4 = 16$