

Use place value understanding and properties of operations to perform multi-digit addition, subtraction, multiplication, and division using a one-digit divisor (Standards 4.NBT.4–6).

Standard 4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Please Note: Expectations in this strand are limited to whole numbers less than or equal to 1,000,000.

Key Elements: Divide up to four digits by one digit finding the quotient with remainders.

Place Value Section Method – Build up each section of a rectangle, one section for each place value of the dividend to solve for the quotient. This begins with the largest place value and down to the ones place. After all the sections have been divided, add up the sub-quotients to find the final quotient

Solve: $738 \div 6 = ?$

Partial Product Method – When dividing 738 by 6, students are able to take groups of 10's or 100's out of the dividend by multiplying the divisor by one hundred and then by tens until students are unable to divide anymore. These are the steps:

1. First make a long division bracket (it's been called the long 7)
2. Then make an "x" sign where the quotient goes to show that students will multiply the divisor by a number they chose
3. Multiply the divisor by the number chosen and place the product in the long division bracket and subtract.
4. Continue this process until the answer is smaller than the divisor.
5. Add all the numbers on the outside of the long division bracket to get your quotient.

After students have completed the partial product, students should check to confirm they completed the problem completely by multiplying the divisor by the answer and then adding the remainder. The answer should be the dividend.