

Name: _____

Date: _____

Lesson 4: Division Note Sheet

Vocabulary:

Dividend = The term being divided by

Divisor = The term being used to divide into another term (the dividend)

Quotient = The resulting term

Remainder = The leftover term

Label the dividends, divisors, quotients, and remainders in the equations below:

$$\underline{25} \div \underline{6} = \underline{4} \text{ R } \underline{1}$$

Definition of Division:

Division is to multiplication as subtraction is to addition. Just as subtraction can be thought of as the 'reverse' of addition, division is like the 'reverse' of multiplication.

$3 + 7 = 10$ To get back to 3 from 10, subtract 7.

$3 \times 7 = 21$ To get back to 2 from 21, divide by 7.

Additionally, just as an addition equation implies two subtraction equations, a multiplication equation implies two division equations.

$4 + 5 = 9$ \rightarrow $9 - 5 = 4$ & $9 - 4 = 5$

$4 \times 5 = 20$ \rightarrow $20 \div 5 = 4$ & $20 \div 4 = 5$

Now you try:

$3 \times 6 = 18$ \rightarrow $18 \div 6 = \underline{\quad}$ & $18 \div 3 = \underline{\quad}$

$2 \times 8 = 16$ \rightarrow $16 \div 2 = \underline{\quad}$ & $16 \div 8 = \underline{\quad}$

Formal Definition: If $a = b * c$, then $a \div b = c$ and $a \div c = b$.

Informally, you can think of division like dividing the dividend into a divisor number of groups. For example, if you divide 19 sheep into three groups, each group will have 6 sheep with one left over. This represents the equation $19 \div 3 = 6 \text{ R } 1$.

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Practice Problems:

The best way to remember single-digit calculations is practice. Unfortunately, there is no shortcut for single-digit division. To evaluate a division expression, you have to find the number that, when multiplied by the divisor, produces the highest number less than or equal to the dividend. The difference between this highest number and the dividend is the remainder. Some of the following expressions divide evenly, but some don't. For those that don't, find the remainder.

$18 \div 9 = \underline{\quad}$	$54 \div 6 = \underline{\quad}$	$31 \div 3 = \underline{\quad}$
$6 \div 2 = \underline{\quad}$	$36 \div 4 = \underline{\quad}$	$45 \div 6 = \underline{\quad}$
$72 \div 9 = \underline{\quad}$	$21 \div 3 = \underline{\quad}$	$41 \div 7 = \underline{\quad}$
$43 \div 5 = \underline{\quad}$	$12 \div 2 = \underline{\quad}$	$32 \div 8 = \underline{\quad}$
$48 \div 6 = \underline{\quad}$	$68 \div 8 = \underline{\quad}$	$56 \div 7 = \underline{\quad}$