

Whole Numbers: Division

Vocabulary

Division	Repeated subtraction. Dividing two numbers such as 6 divided by 3 can be thought of as asking how many groups of 3 are in the number 6.
Division sign “÷”	Symbol used to signify division
Dividend	The number that is being divided
Divisor	The number used to divide the Dividend
Quotient	The result of subtraction
Remainder	The portion “leftover” when a Dividend is not exactly divisible by the Divisor

Example: 6 ÷ 3 = 2 or 6 = 3 · 2
 Dividend divided by Divisor equals Quotient

 7 ÷ 3 = 2 , remainder 1 or 7 = 3 · 2 + 1
 Dividend divided by Divisor equals Quotient

To check: Divisor · quotient + remainder = Dividend
 6 ÷ 3 = 2 check: 3 · 2 + 0 = 6
 7 ÷ 3 = 2 , remainder 1 check: (3 · 2) + 1 = 7

NOTE:

Division by 0 is not allowed. Consider that $6 \div 3 = 2$ because $3 \cdot 2 = 6$.

Now consider the problem: $6 \div 0$ What number times 0 results in 6? None.

Therefore, **division by 0 is undefined.**

The quotient of $0 \div 6$ is considered to be 0 since $0 \cdot 6 = 0$. 0 divided by any number (except 0) is 0.

TRY:

17 ÷ 6 = _____ 0 ÷ 6 = _____ 8 ÷ 0 = _____

Long division with remainders:

$ \begin{array}{r} 21 \text{ remainder } 2 \\ 12 \overline{)254} \\ \underline{24} \\ 14 \\ \underline{12} \\ 2 \end{array} $	<p>TRY:</p> $9 \overline{)3525}$
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TRY:

$$6 \overline{)219}$$

$$15 \overline{)24,005}$$

Words that Indicate Division	Expression	Quotient
The quotient of eight and four	$8 \div 4$	2
Twelve divided by three	$12 \div 3$	4

TRY:

Words that Indicate Division	Expression	Quotient
The quotient of ten and two		
Fifteen divided by five		

Problems:

ABC company has bonus money of \$5,216 dollars to distribute evenly to the 16 employees. How much bonus will each employee get?

Statement: $B = 5216 \div 16$

Sentence: Each employee will get \$326 bonus dollars.

Try:

Ticket receipts for the musical were \$268. If each ticket costs \$4, how many tickets were sold?

Statement:

Sentence:

A child's game requires 14 buttons. How many complete games can be made with 232 buttons?

Statement:

Sentence: