

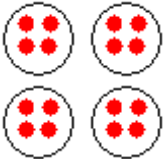
Division Concepts and Facts: Math Hints and Reminders

Reviewing the Meaning of Division

Here's a little division vocabulary to refresh your memory:

Quotient	The answer to a division problem
Dividend	The number to be divided in a division problem
Divisor	The number by which a dividend is divided: the "goes into" number
Fact Family	A group of related facts using the same set of numbers: $5 \times 9 = 45$ $45 \div 9 = 5$ $9 \times 5 = 45$ $45 \div 5 = 9$

There are two ways that you can write a division problem: $10 \div 2 = 5$ and $2 \overline{)10}$.
And believe it or not, there are three ways to think about division:

Division as Sharing	Division as Repeated Subtraction	Division as the Opposite of Multiplication
<p>Find $16 \div 4$</p> <p>Say you have 16 lollipops and you want to share them with 4 of your friends. How many lollipops should each friend get?</p>  <p>Each friend gets 4 lollipops.</p>	<p>Find $16 \div 8$</p> <p>Subtract 8 from 16. Continue to subtract 8 until you reach zero.</p> $16 - 8 = 8$ $8 - 8 = 0$ <p>Now count how many times you subtracted: 2 times. So, 2 is the answer.</p>	<p>Find $16 \div 2$</p> <p>Put your multiplication facts to work.</p> <p>Think: What number times 2 equals 16?</p> $2 \times 8 = 16 \text{ so } 16 \div 2 = 8$

Dividing with 2, 5, and 9

To divide by 2, 5, and 9, just take your basic multiplication facts and shake them up a little. To find $63 \div 9$, think: 9 times what number equals 63? $9 \times 7 = 63$. So, $63 \div 9 = 7$.

Special Quotients

Special numbers require special treatment! You cannot divide by zero – not ever! You can say $0 \div 2 = 0$, but you can never say $2 \div 0$. You'll be in good shape if you memorize these rules for dividing by 0 and 1.

Division rules for 0	Division rules for 1
<ul style="list-style-type: none"> 0 divided by any number (except 0) is 0. You cannot divide by 0 (0 can never be a “divisor”). <p>Look at the fact family for 0, 0, and 4:</p> $4 \times 0 = 0 \quad 0 \div 4 = 0$ $0 \times 4 = 0 \quad 4 \div 0 = \text{Can't do it!}$ <p>You can also write:</p> $\begin{array}{r} 0 \\ 4 \overline{) 0} \end{array}$ <p>but you can't write $0 \overline{) 4}$.</p>	<ul style="list-style-type: none"> Any number divided by 1 is that number. Any number divided by itself (except 0) is 1. <p>Look at the fact family for 1, 8, and 8:</p> $8 \times 1 = 8 \quad 8 \div 1 = 8$ $1 \times 8 = 8 \quad 8 \div 8 = 1$

Dividing with 3, 4, 6, 7, and 8

Multiplication can help you divide by 3, 4, 5, 6, 7, and 8. What's $28 \div 7$? Think: 7 times what number equals 28? $7 \times 4 = 28$. So, $28 \div 7 = 4$.

If you're consistently finding the wrong quotients, it may be that you don't have your multiplication facts down. Remember, there is no trick to memorizing multiplication facts; you just have to do it!

Exploring Even and Odd Numbers

No matter how big a number is, if it has 0, 2, 4, 6, or 8 in the ones place, it's even. If it has 1, 3, 5, 7, or 9 in the ones place, it's odd. For example: 42,000,003 is an odd number.

Even numbers can be divided into two equal groups. Odd numbers cannot be divided into two equal groups. 1 will always be left over.