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Define remainder in math

Given article text here 19 ÷ 5 = 3 with a remainder of 4 The Remainder is the value left after division. When the first number (dividend) does not divide exactly by another number (divisor), we are left with a value once the division is done, called the remainder. Given article text here The Creative Commons license allows you to remix, transform, or build upon the material as long as you distribute your contributions under the same license as the original. You cannot apply additional restrictions that might limit others' use of the material. In mathematics, a remainder is the leftover value after dividing one number by another. There are two cases: when the dividend is completely divisible by the divisor, leaving no remainder, and when it's not, resulting in some value left over. The remainder is always less than the divisor. Step 2: Check if the dividend appears in the table of the divisor. If not, find the multiple of the divisor nearest to the dividend. Here, 69 is not in the table of 6, so we'll use the formula or long division method instead. Step 3: Subtract this multiple from the dividend. $69 - 66 = 3$ To find the remainder, you can also use the formula: Remainder = Dividend - (Divisor × Quotient). Here, the remainder is $69 – (6 × 11) = 3$. For example, let's divide 75 by 4 to find the remainder. Using long division, we get a quotient of 18 with a remainder of 3. Properties of a Remainder: * The remainder is always less than the divisor. * If one number divides another completely, then the remainder is 0 (complete division). * If a dividend is a multiple of the divisor, then the remainder is also 0. To understand remainders better, consider dividing a group of objects into equal groups. For example, you can divide 12 flowers among 3 children, giving each child 4 flowers and leaving none behind. If you have 9 books to divide between two groups, each group gets 4 books, leaving 1 book ungrouped. We can represent the parts of a division problem using a single equation, such as: $9 \div 4 = 2$ R 1 or $21 \div 7 = 3$ R 1. This shows the dividend (9), divisor (4), quotient (2), and remainder (1). To represent the remainder in another way, you can use mixed fractions. For example, dividing 19 by 2 gives $\frac{19}{2} = 9\frac{1}{2}$. When one number divides another completely, the remainder is always 0. The remainder in a division problem is what's left over after the division process. It comes from the Latin word "remanere," meaning "to remain." In this article, we've learned about remainder, methods for finding it, and long division. Let's take a few examples to better understand. Solved Examples on Remainder 1. Dividing 23 by 4 gives a remainder of 3. 2. 87 divided by 3 leaves no remainder since it's perfectly divisible. 3. The missing term is 42, as 7 times 6 equals that. 4. When dividing 100 by 9, the quotient is 11 with a remainder of 1. Practice Problems on Remainder To check your knowledge, attend this quiz. Correct answers are: $570 = (81 \times 7) + 3$, and 40 is a multiple of 10 so it has no remainder. Frequently Asked Questions on Remainder - Is the remainder always 0? It's not if the number doesn't divide evenly. - The rule for remainders states that it must be less than or equal to the divisor. - Long division can be lengthy and complicated with bigger numbers, but you can use a shortcut: $Remainder = Dividend - (Divisor \times Quotient)$ When the remainder is zero, the number is completely divisible by both the quotient and divisor. The remainder represents what's left after completing a division process. As an illustration, let's consider the scenario where you have 15 cookies to be divided among 3 friends, Mary, David, and Jake, including yourself. You want to share the cookies equally, resulting in 4 equal groups. However, there are 3 cookies "left over," which cannot be further divided equally. These 3 cookies represent the remainder. The concept of a remainder is essential in division. It's the leftover amount after dividing one number by another. For instance, when 15 cookies were shared among 4 people, we ended up with 3 cookies as the remainder. In this case, the remainder (3) is less than the divisor (the number of groups or people). Let's examine an example involving pizza slices. If you have 8 slices to be divided equally among 2 children, there are no leftover pieces. This results in a remainder of 0. Finding remainders can be achieved through various methods, including long division. For instance, using long division, we find that the remainder when dividing 15 cookies by 4 is indeed 3. Similarly, other examples show that when you divide certain numbers, like 10, 18, or 35, the remainder is 0. A remainder can be represented in different ways. One approach is to write it as a mixed fraction, where the quotient and divisor form the whole number part, and the remainder forms the numerator. For example, when dividing 7 by 2, we get a quotient of 3 and a remainder of 1, which can be written as 3½. The properties of remainders are essential to understanding their significance. The remainder is always less than the divisor, and if it's greater or equal, the division may be incorrect. Additionally, the remainder can be greater, lesser, or equal to the quotient. What is the remainder when 3723 is divided by 23? Check if the answer you got is correct. Solution: Let us divide 3723 by 23 using long division. Therefore, the remainder is 20. Now, we will check the answer by substituting all the values of dividend, divisor, quotient, and the remainder in the following equation: Dividend = Divisor × Quotient + Remainder 3723 = 23 × 161 + 20 = 3703 + 20 = 3723. Since we have the same values on both sides, our answer is correct. Therefore, the answer to division is correct. Given article text here To determine the remainder in math, we need to perform division between two numbers. The remainder is the number left over after dividing one number by another without getting an exact result. For example, when 15 is divided by 3, the quotient (number of times the divisor divides the dividend) is 5 with a remainder of 0. Jamie and Roger went on a 10-mile hike that lasted 4 hours. To find out how many miles they hiked per hour, we can divide the total distance by the time taken: 10 ÷ 4 = 2½ (or 2.5). The leftover part is ½ mile or 0.5. Sometimes, when finding a solution, we might ignore the remainder and only use whole numbers. For example, Bobbi had 8 feet of lumber to make bookshelves that were 3 feet long. She could only make 2 shelves since she didn't have enough for another one (8 ÷ 3 = 2 with a leftover of 2 feet). In some cases, we round up to the next highest whole number. Ken bought hot dog buns in bags of 8 and needed a total of 60 buns. He ended up buying 7 packages (60 ÷ 8 = 7 with a remainder of 4), but he would have been short 2 buns, so he actually needed to buy 8 packages.