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7/8 - 1/8 is 3/4.Steps for subtracting fractionsMathStep (Works offline) Download our mobile app and learn to work with fractions in your own time: Android and iPhone/ iPad Related: 14/8-1/8 7/8-2/8 7/16-1/8 7/8-1/16 21/8-1/8 7/8-3/8 7/24-1/8 7/8-1/24 35/8-1/8 7/8-5/8 7/40-1/8 7/8-1/40 49/8-1/8 7/8-7/8 7/56-1/8 7/8-1/56 home / math / fraction calculator Below are multiple fraction calculators capable of addition, subtraction, multiplication, division, simplification, and conversion between fractions and decimals. Fields above the solid black line represent the numerator, while fields below represent the denominator. Mixed Numbers Calculator Simplify Fractions Calculator Decimal to Fraction Calculator Fraction to Decimal Calculator Big Number Fraction Calculator Use this calculator if the numerators or denominators are very big integers. In mathematics, a fraction is a number that represents a part of a whole. It consists of a numerator and a denominator. The numerator represents the number of equal parts of a whole, while the denominator is the total number of parts that make up said whole. For example, in the fraction of 38, the numerator is 3, and the denominator is 8. A more illustrative example could involve a pie with 8 slices. 1 of those 8 slices would constitute the numerator of a fraction, while the total of 8 slices that comprises the whole pie would be the denominator. If a person were to eat 3 slices, the remaining fraction of the pie would therefore be 58 as shown in the image to the right. Note that the denominator of a fraction cannot be 0, as it would make the fraction undefined. Fractions can undergo many different operations, some of which are mentioned below. Addition: Unlike adding and subtracting integers such as 2 and 8, fractions require a common denominator to undergo these operations. One method for finding a common denominator involves multiplying the numerators and denominators of all of the fractions involved by the product of the denominators of each fraction. Multiplying all of the denominators ensures that the new denominator is certain to be a multiple of each individual denominator. The numerators also need to be multiplied by the appropriate factors to preserve the value of the fraction as a whole. This is arguably the simplest way to ensure that the fractions have a common denominator. However, in most cases, the solutions to these equations will not appear in simplified form (the provided calculator computes the simplification automatically). Below is an example using this method. ab + cd = a×db×d + c×bd×b = ad + bcbd EX: 34 + 16 = 3×64×6 + 1×46×4 = 2224 = 1112 This process can be used for any number of fractions. Just multiply the numerators and denominators of each fraction in the problem by the product of the denominators of all the other fractions (not including its own respective denominator) in the problem. EX: 14 + 16 + 12 = 1×6×24×6×2 + 1×4×26×4×2 + 1×4×62×4×6 = 1248 + 848 + 2448 = 4448 = 1112 An alternative method for finding a common denominator is to determine the least common multiple (LCM) for the denominators, then add or subtract the numerators as one would an integer. Using the least common multiple can be more efficient and is more likely to result in a fraction in simplified form. In the example above, the denominators were 4, 6, and 2. The least common multiple is the first shared multiple of these three numbers. Multiples of 2: 2, 4, 6, 8 10, 12 Multiples of 4: 4, 8, 12 Multiples of 6: 6, 12 The first multiple they all share is 12, so this is the least common multiple. To complete an addition (or subtraction) problem, multiply the numerators and denominators of each fraction in the problem by whatever value will make the denominators 12, then add the numerators. EX: 14 + 16 + 12 = 1×34×3 + 1×26×2 + 1×62×6 = 312 + 212 + 612 = 1112 Fraction subtraction is essentially the same as fraction addition. A common denominator is required for the operation to occur. Refer to the addition section as well as the equations below for clarification. ab – cd = a×db×d – c×bd×b = ad – bcbd EX: 34 – 16 = 3×64×6 – 1×46×4 = 1424 = 712 Multiplying fractions is fairly straightforward. Unlike adding and subtracting, it is not necessary to compute a common denominator in order to multiply fractions. Simply, the numerators and denominators of each fraction are multiplied, and the result forms a new numerator and denominator. If possible, the solution should be simplified. Refer to the equations below for clarification. ab × cd = acbd EX: 34 × 16 = 324 = 18 The process for dividing fractions is similar to that for multiplying fractions. In order to divide fractions, the fraction in the numerator is multiplied by the reciprocal of the fraction in the denominator. The reciprocal of a number a is simply 1a. When a is a fraction, this essentially involves exchanging the position of the numerator and the denominator. The reciprocal of the fraction 34 would therefore be 43. Refer to the equations below for clarification. ab / cd = ab × dc = adbc EX: 34 / 16 = 34 × 61 = 184 = 92 It is often easier to work with simplified fractions. As such, fraction solutions are commonly expressed in their simplified forms. 220440 for example, is more cumbersome than 12. The calculator provided returns fraction inputs in both improper fraction form as well as mixed number form. In both cases, fractions are presented in their lowest forms by dividing both numerator and denominator by their greatest common factor. Converting between fractions and decimals: Converting from decimals to fractions is straightforward. It does, however, require the understanding that each decimal place to the right of the decimal point represents a power of 10; the first decimal place being 101, the second 102, the third 103, and so on. Simply determine what power of 10 the decimal extends to, use that power of 10 as the denominator, enter each number to the right of the decimal point as the numerator, and simplify. For example, looking at the number 0.1234, the number 4 is in the fourth decimal place, which constitutes 104, or 10,000. This would make the fraction 123410000, which simplifies to 6175000, since the greatest common factor between the numerator and denominator is 2. Similarly, fractions with denominators that are powers of 10 (or can be converted to powers of 10) can be translated to decimal form using the same principles. Take the fraction 12 for example. To convert this fraction into a decimal, first convert it into the fraction of 510. Knowing that the first decimal place represents 10-1, 510 can be converted to 0.5. If the fraction were instead 5100, the decimal would then be 0.05, and so on. Beyond this, converting fractions into decimals requires the operation of long division. Calculators » Math » Fractions Our online tools will provide quick answers to your calculation and conversion needs. On this page, you can perform arithmetic operations on fractional numbers viz., addition, subtraction, multiplication, division, and comparison. This calculator is very helpful for folks who are into construction works, particularly, carpentry. © everydaycalculation.com Use this popular fractions calculator to add, subtract, multiply and divide fractions, including mixed number fractions. The calculator gives explanation of the working steps involved and simplifies the result using the greatest common denominator. Check whether your denominators (bottom numbers) match.They do? Great. Jump to step 5.They don't? OK. Multiply your differing denominators together……And adjust both your nominators (top numbers) proportionately. E.g. if you doubled the denominator, then double its numerator.Add together the nominators, and put this total over the common denominator.Simplify the fraction to the smallest possible denominator, with the nominator also reduced proportionately.Quick formula\(\dfrac{a}{b} + \dfrac{c}{d} = \dfrac{ad + bc}{bd} \)Example of how to add fractions\(\dfrac{2}{3} + \dfrac{1}{4} = \dfrac{(2\times4) + (3\times1)}{3\times4} = \dfrac{11}{12} \)Check whether your denominators (bottom numbers) match.They do? Great. Jump to step 5.They don't? OK. Multiply your differing denominators together……And adjust both your nominators (top numbers) proportionately. 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This is where the order of operations comes in. Thankfully, there are a couple of mnemonics to assist us with remembering the order of operations. Read our article about PEMDAS. Enter the values and this calculator gives you fraction in easy steps. This Fraction calculator simplify fractions of addition, subtraction, multiplication, and division. Perform simplifying fractions effortlessly by entering the numerator and denominator. Whether you have fractions or mixed numbers, The fraction calculator will reduce them to the most simplified form within seconds. Formula Used By Fraction Calculator: The mixed number calculator displays a fraction addition, subtraction, multiplication, and division. This utilizes the below formulas by taking the hassle out of fractions and gives you accurate results. How to Add Fractions? Identify the common denominators Find the least common multiple (LCM) or least common denominator (LCD) If the denominators are not the same, multiply each fraction by a factor that makes its common denominator equal to the LCM Add the numerators and convert the given improper fractions to the mixed. Formula for Adding Fractions: $$\dfrac{a}{b} + \dfrac{c}{d} = \dfrac{ad + bc}{bd}$$ Example: How to add fractions 4/3 & 2/3? Solution: 4/3 + 2/3 = (4+2)/3 (LCD is 3) = 6/3 = 2 How to Subtract Fractions? Identify the common denominators Find the least common multiple or the least common denominator If the denominators are not the same, multiply each fraction by a factor that makes its denominator equal to the LCM Subtract the numerators and simplify fractions to the lowest terms Formula for Fractions Subtraction: $$ \dfrac{a}{b} – \dfrac{c}{d} = \dfrac{ad – bc}{bd} $$ Example: How to subtract fractions 2/7 & 8/3? Solution: 2/7 - 8/3 = 2(3) - 7(8) / 21 (LCD is 21) = (6-56) / 21 = -50 / 21 How to Multiply Fractions? Multiply numerators of all fractions Likewise, go by multiplying denominators as well Write the results as a single fraction Simplify to reduce the fraction to lowest terms Formula for Fractions Multiplication: $$ \dfrac{a}{b} \times \dfrac{c}{d} = \dfrac{ac}{bd} $$ Example: How to multiply the numbers 1/7 & 8/9? Solution: 1/7 & 8/9 = (1*8)/(7*9) = 8/63 How to Divide Fractions? Find the reciprocal and rewrite the Division as Multiplication Flip the second fractions by switching the top and bottom numbers Multiply Numerators and Denominators Simplify the results to the lowest form Formula for Fractions Division: $$ \dfrac{a}{b} \div \dfrac{c}{d} = \dfrac{ad}{bc} $$ Example: How to divide fractions 7/3 ÷ 7/2? Solution: Here we have: 7/3 ÷ 7/2 The reciprocal of the divisor (7/2) is 2/7. So we have; 7/3 x 2/7 = (7*2)/(3*7) = 14/21 = 2/3 Common Fractions to Decimals: Our fraction calculator helps you to simplify and reduce fractions to the lowest form. It performs fraction operations, and expressions with integers, decimals, and mixed numbers. The following table is packed with fractions values that you may encounter on a daily basis and may help you simplify fractions value in seconds: 64th 32nd 16th 8th 4th 2nd Decimal 1/64 0.015625 2/64 1/32 0.03125 3/64 0.046875 4/64 2/32 1/16 0.0625 5/64 0.078125 6/64 3/32 0.09375 7/64 0.109375 8/64 4/32 2/16 1/8 0.125 9/64 0.140625 10/64 5/32 0.15625 11/64 0.171875 12/64 6/32 3/16 0.1875 13/64 0.203125 14/64 7/32 0.21875 15/64 0.234375 16/64 8/32 4/16 2/8 1/4 0.25 17/64 0.265625 18/64 9/32 0.28125 19/64 0.296875 20/64 10/32 5/16 0.3125 21/64 0.328125 22/64 11/32 0.34375 23/64 0.359375 24/64 12/32 6/16 3/8 0.375 25/64 0.390625 26/64 13/32 0.40625 27/64 0.421875 28/64 14/32 7/16 0.4375 29/64 0.453125 30/64 15/32 0.46875 31/64 0.484375 32/64 16/32 8/16 4/8 2/4 1/2 0.5 33/64 0.515625 34/64 17/32 0.53125 35/64 0.546875 36/64 18/32 9/16 0.5625 37/64 0.578125 38/64 19/32 0.59375 39/64 0.609375 40/64 20/32 10/16 5/8 0.625 41/64 0.640625 42/64 21/32 0.65625 43/64 0.671875 44/64 22/32 11/16 0.6875 45/64 0.703125 46/64 23/32 0.71875 47/64 0.734375 48/64 24/32 12/16 6/8 3/4 0.75 49/64 0.765625 50/64 25/32 0.78125 51/64 0.796875 52/64 26/32 13/16 0.8125 53/64 0.828125 54/64 27/32 0.84375 55/64 0.859375 56/64 28/32 14/16 7/8 0.875 57/64 0.890625 58/64 29/32 0.90625 59/64 0.921875 60/64 30/32 15/16 0.9375 61/64 0.953125 62/64 31/32 0.96875 63/64 0.984375 64/64 32/32 16/16 8/8 4/4 2/2 1 References: Wikipedia: Fractions, Reciprocals and the "invisible denominator", Ratios, Decimal fractions and percentages, Historical notions, Arithmetic with fractions. The #1 online fraction calculator. Easily add, subtract, multiply, divide and simplify fractions. Because math with fractions can be difficult, we developed the fraction calculator. Fill in your two fractions below (the numerator above the line and the denominator below the line) and submit if you want to add, subtract, multiply or divide. The fraction calculator shows you step-by-step how to add, subtract, multiply or divide your fractions and automatically reduces the result to the lowest terms. With the help of this calculator you can solve all your fraction problems. Simple fraction calculatorMixed fraction calculator The fraction calculator has not yet performed a calculation. Enter two fractions above (the numerators above the lines and the denominators below the lines) and choose your action (adding, subtracting, multiplying or dividing). Depending on whether you want to add, subtract, divide, or multiply fractions, you need to follow different rules and steps. The fraction calculator not only gives you the result, but also shows you the rules and steps that apply to your calculation. In addition, the result is automatically simplified (reduced) using the greatest common factor. If the result is an fraction in which the numerator is greater than or equal to the denominator (improper fraction), the fraction calculator will convert it to a mixed fraction. All steps of the calculation, including simplifying and converting to a mixed number (if necessary), are shown here. Examples, rules and steps for each type of calculation can be found here: Fraction Calculator performs the addition, subtraction, multiplication, and division of two given fractions. Fractions are numerical values that represent a part of a whole. A simple fraction is given by the notation - numerator / Denominator. What is a Fraction Calculator? Fraction Calculator is an online tool that can be used to add, subtract, multiply and divide fractions with like or unlike denominators. It provides a quick and easy way to solve complex problems as well as tally results within seconds. To use the fraction calculator, enter the values in the input boxes given below. Fraction Calculator NOTE: Enter values upto 4 digits only. How to Use the Fraction Calculator? Follow these simple steps to add, multiply, subtract or divide any two fractions using an online fraction calculator: Step 1: Go to Cuemath's online fraction calculator. Step 2: Enter the values in the input boxes of the fraction calculator and choose the operation you want to perform. Step 3: Click on the "Calculate" button to add, subtract, multiply and divide two fractions. Step 4: Click on the "Reset" button to clear the fields and enter new values. How Does a Fraction Calculator Work? The numerator of a fraction is used to describe the number of equal parts of a whole while the denominator shows the complete part or the whole. A point to be noted is that for the fraction to exist the denominator has to be non-zero. Addition: To add fractions, the first step is to have the same denominators. To determine the common denominator take their LCM. Next, multiply the denominator with a number that gives the same value as the LCM. The numerator will also be multiplied by this number. Once both fractions are converted to have the same denominators, add the numerators. Subtraction: Subtraction of two fractions can be performed only if both have common denominators. Using the LCM method the fractions can be converted to have the same denominators and then the numerators are subtracted. Multiplication: The multiplication of fractions is much easier than addition or subtraction. First, multiply the numerators, then multiply the denominators. After that, reduce the fraction to its lowest terms, to get the final answer. Division: The division of fractions is similar to multiplication. Here, we multiply the first fraction by the reciprocal (inverse) of the second and simplify it to its lowest form. Want to find complex math solutions within seconds? Use our free online calculator to solve challenging questions. With Cuemath, find solutions in simple and easy steps. Book a Free Trial Class Solved Examples on Fraction Calculator Example 1: Add (2/3) + (5/6) and verify it using the fraction calculator. Solution: As the denominators are not same, we find the LCM. LCM (3, 6) = 6 (2/3) + (5/6) = [(2 × 2)/(3 × 2)] + (5/6) = 4/6 + 5/6 = (4 + 5)/6 = 9/6 = 3/2 Example 2: Subtract (7/8) - (1/4) and verify it using the fraction calculator. Solution: LCM (8, 4) = 8 (7/8) - (1/4) = (7/8) - [(1 × 2)/(2 × 4)] = 7/8 - 2/8 = (7 - 2)/8 = 5/8 Example 3: Multiply (4/15) × (9/16) and verify it using the fraction calculator. Solution: (4/15) × (9/16) = 36/240 On simplifying (4/15) × (9/16) = 3/20 Example 4: Divide (2/3) ÷ (4/5) and verify it using the fraction calculator. Solution: The reciprocal of 4/5 is 5/4. (2/3) ÷ (4/5) = (2/3) × (5/4) = 10/12 = 5/6 Similarly, you can try the fraction calculator to perform addition, subtraction, multiplication, and division of two fractions for the following: (5/11) + (4/7) (11/14) - (2/3) (2/9) × (3/8) ☛ Related Articles: Fractions Mixed Fractions ☛ Math Calculators: Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Calculators :: Numbers :: Fraction Calculator The fraction calculator performs all basic operations on fractions and mixed numbers. It performs addition, subtraction, multiplication, division, simplification and comparison of fractions and mixed numbers. The calculator also converts mixed numbers to fractions or decimals and vice versa. Examples $$3\,\frac{1}{4} \cdot 2\,\frac{3}{2} = $$ $$5\,\frac{3}{5} - \frac{7}{6} = $$ Which is bigger: $$2\,\frac{5}{3} \text{ or } 3\frac{1}{5}$$ Convert fraction $\dfrac{173}{14}$ to mixed number. Simplify mixed number $3\dfrac{175}{30}$. Find more worked-out examples in our database of solved problems. Search our database with more than 300 calculators TUTORIAL There are three basic operations for fractions and mixed numbers. 1. Fraction Simplification 2. Fraction Conversion 3. Fraction Arithmetic This calculator can perform these operations and a lot more. Let's start with simplification. The easiest way to simplify a fraction is to divide both the numerator and denominator by the same number. In this example, we can divide 15 and 10 by 5. $$ \dfrac{15}{10} = \dfrac{15:5}{10:5} = \dfrac{3}{2} $$ You can also solve this problem by using calculator. To convert a mixed number to an improper fraction, just multiply the denominator by the whole part and add the numerator. $$ 4\dfrac{3}{5} = \dfrac{5 \cdot 4 + 3}{5} = \dfrac{23}{5} $$ To multiply fractions, first cancel the common factors, then multiply the numerators and denominators. $$ \dfrac{8}{15} \cdot \dfrac{10}{3} = \dfrac{8}{15:5} \cdot \dfrac{10:5}{3} = \dfrac{8}{3} \cdot \dfrac{2}{3} = \dfrac{8 \cdot 2}{3 \cdot 3} = \dfrac{16}{9} $$ 452 861 664 solved problems home / math / fraction calculator Below are multiple fraction calculators capable of addition, subtraction, multiplication, division, simplification, and conversion between fractions and decimals. Fields above the solid black line represent the numerator, while fields below represent the denominator. 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Multiples of 2: 2, 4, 6, 8 10, 12 Multiples of 4: 4, 8, 12 Multiples of 6: 6, 12 The first multiple they all share is 12, so this is the least common multiple. To complete an addition (or subtraction) problem, multiply the numerators and denominators of each fraction in the problem by whatever value will make the denominators 12, then add the numerators. EX: 14 + 16 + 12 = 1×34×3 + 1×26×2 + 1×62×6 = 312 + 212 + 612 = 1112 Fraction subtraction is essentially the same as fraction addition. A common denominator is required for the operation to occur. Refer to the addition section as well as the equations below for clarification. ab – cd = a×db×d – c×bd×b = ad – bcbd EX: 34 – 16 = 3×64×6 – 1×46×4 = 1424 = 712 Multiplying fractions is fairly straightforward. Unlike adding and subtracting, it is not necessary to compute a common denominator in order to multiply fractions. 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Below is an example using this method. ab + cd = a×db×d + c×bd×b = ad + bcbd EX: 34 + 16 = 3×64×6 + 1×46×4 = 2224 = 1112 This process can be used for any number of fractions. Just multiply the numerators and denominators of each fraction in the problem by the product of the denominators of all the other fractions (not including its own respective denominator) in the problem. EX: 14 + 16 + 12 = 1×6×24×6×2 + 1×4×26×4×2 + 1×4×62×4×6 = 1248 + 848 + 2448 = 4448 = 1112 An alternative method for finding a common denominator is to determine the least common multiple (LCM) for the denominators, then add or subtract the numerators as one would an integer. Using the least common multiple can be more efficient and is more likely to result in a fraction in simplified form. In the example above, the denominators were 4, 6, and 2. The least common multiple is the first shared multiple of these three numbers. Multiples of 2: 2, 4, 6, 8 10, 12 Multiples of 4: 4, 8, 12 Multiples of 6: 6, 12 The first multiple they all share is 12, so this is the least common multiple. To complete an addition (or subtraction) problem, multiply the numerators and denominators of each fraction in the problem by whatever value will make the denominators 12, then add the numerators. EX: 14 + 16 + 12 = 1×34×3 + 1×26×2 + 1×62×6 = 312 + 212 + 612 = 1112 Fraction subtraction is essentially the same as fraction addition. A common denominator is required for the operation to occur. Refer to the addition section as well as the equations below for clarification. ab – cd = a×db×d – c×bd×b = ad – bcbd EX: 34 – 16 = 3×64×6 – 1×46×4 = 1424 = 712 Multiplying fractions is fairly straightforward. Unlike adding and subtracting, it is not necessary to compute a common denominator in order to multiply fractions. Simply, the numerators and denominators of each fraction are multiplied, and the result forms a new numerator and denominator. If possible, the solution should be simplified. Refer to the equations below for clarification. ab × cd = acbd EX: 34 × 16 = 324 = 18 The process for dividing fractions is similar to that for multiplying fractions. In order to divide fractions, the fraction in the numerator is multiplied by the reciprocal of the fraction in the denominator. The reciprocal of a number a is simply 1a. When a is a fraction, this essentially involves exchanging the position of the numerator and the denominator. The reciprocal of the fraction 34 would therefore be 43. Refer to the equations below for clarification. ab / cd = ab × dc = adbc EX: 34 / 16 = 34 × 61 = 184 = 92 It is often easier to work with simplified fractions. As such, fraction solutions are commonly expressed in their simplified forms. 220440 for example, is more cumbersome than 12. The calculator provided returns fraction inputs in both improper fraction form as well as mixed number form. In both cases, fractions are presented in their lowest forms by dividing both numerator and denominator by their greatest common factor. Converting between fractions and decimals: Converting from decimals to fractions is straightforward. It does, however, require the understanding that each decimal place to the right of the decimal point represents a power of 10; the first decimal place being 101, the second 102, the third 103, and so on. Simply determine what power of 10 the decimal extends to, use that power of 10 as the denominator, enter each number to the right of the decimal point as the numerator, and simplify. For example, looking at the number 0.1234, the number 4 is in the fourth decimal place, which constitutes 104, or 10,000. This would make the fraction 123410000, which simplifies to 6175000, since the greatest common factor between the numerator and denominator is 2. Similarly, fractions with denominators that are powers of 10 (or can be converted to powers of 10) can be translated to decimal form using the same principles. Take the fraction 12 for example. To convert this fraction into a decimal, first convert it into the fraction of 510. Knowing that the first decimal place represents 10-1, 510 can be converted to 0.5. If the fraction were instead 5100, the decimal would then be 0.05, and so on. Beyond this, converting fractions into decimals requires the operation of long division.