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Decimals, Fractions and Percentages are just different ways of showing the same value: A Half can be written... ... as a fraction: 1⁄2 ... as a decimal: 0.5 ... as a percentage: 50% A Quarter can be written... ... as a fraction: 1⁄4 ... as a decimal: 0.25 ... as a percentage: 25% Here, have a play with it yourself: numbers/images/ani-frac-num-pct.js Here is a table of commonly used values shown in Percent, Decimal and Fraction form: Percent Decimal Fraction 1% 0.01 1/100 5% 0.05 1/20 10% 0.1 1/10 12½% 0.125 1/8 20% 0.2 1/5 25% 0.25 1/4 33⅓% 0.333... 1/3 50% 0.5 1/2 75% 0.75 3/4 80% 0.8 4/5 90% 0.9 9/10 99% 0.99 99/100 100% 1 125% 1.25 5/4 150% 1.5 3/2 200% 2 To convert from percent to decimal divide by 100 and remove the % sign. An easy way to divide by 100 is to move the decimal point 2 places to the left: From Percent To Decimal move the decimal point 2 places to the left Don't forget to remove the % sign! From Decimal To Percent move the decimal point 2 places to the right Don't forget to add the % sign! From Fraction To Decimal To convert a fraction to a decimal divide the top number by the bottom number: Divide 2 by 5: 2 ÷ 5 = 0.4 Answer: 2/5 = 0.4 To convert a decimal to a fraction needs a little more work. First, write down the decimal "over" the number 1:0.751Multiply top and bottom by 10 for every number afterthe decimal point (10 for 1 number, 100 for 2 numbers, and so on):In this case multiply by 100:0.751100Calculate:810Then Simplify the fraction: 34 To convert a fraction to a percentage divide the top number by the bottom number, then multiply the result by 100% First divide 3 by 8: 3 ÷ 8 = 0.375 Then multiply by 100%: 0.375 × 100% = 37.5% Answer: 3⁄8 = 37.5% To convert a percentage to a fraction, first convert to a percentage to a decimal (divide by 100), then use the steps for converting decimal to fractions (like above). Start with:80%First convert to a decimal (divide by 100), then use the steps for converting decimal to fractions (like above). Start with:80%First convert to a decimal=80/100:0.8Write down the decimal "over" the number 1:0.81Multiply top and bottom by 10 for every number after the decimal point (10 for 1 number, 100 for 2 numbers, and so on):In this case multiply by 10:0.8 10:810Calculate:810Then Simplify the fraction: 45 881, 1305,882, 1306,883, 1307,884, 1308,885, 1309,886, 1310 Copyright 2025 Rod Pierce Here you will learn about comparing fractions, decimals, and percentages, including how to define a fraction, decimal, and percentage, convert between them, and compare and order them. Students first learn about comparing fractions and decimals in the fifth grade and expand this knowledge to percents in the sixth grade and seventh grade when working with ratio and proportional relationships and the number system. Fractions, decimals, and percentages are different ways of expressing the same value. Fractions equal parts of a whole. The denominator of a fraction (number below the line) shows how many equal parts the whole have been divided into. The numerator of a fraction (number above the line) shows how many of the equal parts we have. 3 parts shaded out of 5 equal parts. Read as three-fifths See also: Fractions Decimals are numbers that have a whole part and a fractional part that are separated by a decimal point. Our decimal system splits whole numbers into tenths, hundredths, thousandths, and so on. 0.1 is represented on the place value chart. Read as fifteen-hundredths. See also: Decimals Percentages are numbers which are expressed as a fraction of 100. Percent means number of parts per hundred and the symbol per hundred is %, (percent sign). 42 shaded parts out of 100 equal parts is \frac{42}{100}, which is 42% . See also: Percents Lets look at how you can express twenty-hundredths, \, \frac{20}{100}, in fraction, decimal and percent. FRACTION DECIMAL PERCENTas a fraction: \frac{20}{100}=\frac{20\div 20}{100\div 20} = \frac{1}{5} 20 shaded pieces out of 100 equal pieces. OR 1 shaded piece out of 5 equal pieces. As a decimal: \frac{20}{100}=0.20 20 shaded pieces where each piece represents 0.01. As a percent: \cfrac{20}{100}=20 % 20 shaded pieces out of 100 pieces. In order to compare fractions, decimals and percentages, you will need to know how to convert them to the same form. Converting Fractions, Decimals, and Percentages \hspace{1.2cm} To Fractions with a Denominator of \text{100}\hspace{1.2cm} \hspace{1.2cm} Fractions (Use equivalent fractions) Decimals (Numbers to right of decimal point are the numerator of the fraction) Percents (Percents are fractions of \text{100}) 1\frac{1}{2}=\frac{1}{times 50}{2 \times 50}=\frac{50}{100} 150 \%=\frac{50}{100} 50 \% 0.5=\frac{50}{100} 50\%=\frac{50}{100} 50\% 0.75=\frac{75}{100} 75%=\frac{75}{100} 75%=\frac{3\times 25}{4 \times 25}=\frac{75}{100} 0.30=\frac{30}{100} 30%=\frac{30}{100} Step-by-step guide: Decimal to a fraction Step-by-step guide: Percent to a fraction Converting Fractions & Decimals \hspace{1.2cm} to Percents \hspace{1.2cm} (Use equivalent fractions) Decimals (Multiply decimal by \textbf{100}) \frac{1}{2}=\frac{50}{2}\times 50=0.40=0.40 40 \%=\frac{40}{100} = 40 = 0.40 = 0.4 You are not comparing the numbers, so you do not need to go to Step 4. Convert the numbers below to percent. 50 \% 30% Step-by-step guide: Decimal to a percent Step-by-step guide: Fraction to a percent See also: Powers of 10 Converting Fractions and Percents \hspace{1.2cm} Fractions (Use long division) Decimals (Change to a fraction and then decimal in the hundredths place). 50%=\frac{50}{100}=\frac{1}{2} 75%=0.75times notice for 75 becomes 0.50 which is the same as dividing 50 by 100 75%=\frac{75}{100}=0.75 Notice how 75 becomes 0.75 which is the same as dividing 75 by 100 33%=\frac{33}{100}=0.33 Notice how 33 becomes 0.33 which is the same as dividing 33 by 100 Step-by-step guide: Fraction to a decimal Step-by-step guide: Percent to a decimal Use this quiz to assess your grade 4 to 6 students understanding of converting fractions, decimals, and percents. 10+ questions with answers to identify areas of strength and support! DOWNLOAD FREE Use this quiz to assess your grade 4 to 6 students understanding of converting fractions, decimals, and percents. 10+ questions with answers to identify areas of strength and support! DOWNLOAD FREE x Use this quiz to assess your grade 4 to 6 students understanding of converting fractions, decimals, and percents. 10+ questions with answers to identify areas of strength and support! DOWNLOAD FREE Now that you know how to convert fractions, decimals, and percents to the same form, lets compare them. For example, list the following numbers in order from least to greatest. \frac{1}{4} \hspace{0.5cm} 0.19 \hspace{0.5cm} 0.3 \hspace{0.5cm} 26 \% \hspace{0.5cm} \frac{1}{5} Before comparing the numbers in order from least to greatest: 0.19=\frac{19}{100}, \, \frac{1}{4} = \frac{25}{4}, \times, \times, 25}{4 \, \times, 25}, 10}{100}, \times, \frac{25}{100} 0.19=\frac{19}{100} 0.3=\frac{3}{10}=\frac{30}{100} 26 \%=\frac{26}{100} \, \, 0.3 Another way you could have done the comparison is to convert all the numbers to decimals. \frac{1}{4}=\frac{25}{100}=25 \% 0.19, \, multiply by 100 to change a decimal to a percent. 0.19 \times 100=19. This is the same as moving the decimal point 2 decimal places to the right. 0.19=19 \% 0.3, \, multiplied by 100 changes a decimal to a percent. 0.3 \times 100=30. This is the same as moving the decimal point 2 decimal places to the right. 0.3=30 \% 0.3=\frac{20}{100}=20 \% The numbers from least to greatest are: 0.19=19 \%, \, \frac{1}{5}=20 \%, \, \frac{1}{4}=25 \%, \, 26 \%, \, 0.3=30 \% How does this relate to 5th grade math, 6th grade math and 7th grade math? Grade 5 Number and Operations Base Ten (5.NBT.A.3.a)Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, for example, 347.392 = 3 \times 100 + 4 times 10 + 7 \times 1 + 3 \times 1 + \times 1 \times \bigl(\frac{1}{10}\bigr) + 9 \times \bigl(\frac{1}{100}\bigr). Grade 6 Ratios and Proportional Relationships (6.RP.A.3.c)Find a percent of a quantity as a rate per 100 (for example, 30% of a quantity means \, \frac{30}{100} \, times the quantity); solve problems involving finding the whole, given a part and the percent. Grade 7 The Number System (7.NS.2d)Convert a rational number to a decimal using long division. Know that the decimal form of a rational number terminates in 0s or eventually repeats. In order to compare fractions, decimals, and percentages, convert them to the same form. Choose a form (fraction, decimal, percentage). Convert the numbers to the form you chose. Write the numbers in the correct order. Convert the numbers below to fractions with a denominator of 100. \frac{3}{4} \, \, 75 \%, \, 0.75 Choose a form (fraction, decimal, percentage). Convert the numbers to fractions. 2Convert the numbers to the form you chose. Since you are converting the numbers to fractions, use equivalent fractions to convert the denominator of the fractions to 100. \frac{3}{4}=\frac{3 \, \times, \, 25}{4 \, \times \, 25}=\frac{75}{100} 0.75 is seventy-five hundredths, which is \, \cfrac{75}{100} . Write the percent as a fraction. 75 \% is \, \cfrac{75}{100} . 3Write the numbers in the new form. If youre comparing the numbers, go to Step 4. \frac{75}{100} \, \, 40 % Choose a form (fraction, decimal, percentage). Convert the numbers to decimals. \frac{2}{5} \, \, 40 % Choose a form (fraction, decimal, percentage). Convert the numbers to decimals. Convert the numbers to the decimal numbers. Convert the numbers to the form you chose. Since you are converting the numbers in the new form. If youre comparing the numbers, go to Step 4. \frac{2}{5}=0.40=0.40 40 \%=0.40 You are not comparing the numbers, so you do not need to go to Step 4. Convert the numbers to the form you chose. Make the percent a decimal by dividing 40 by 100 which is the same as moving the decimal point two places to the left. 67%=\frac{2}{100} = 67 Using the rules of dividing by powers of ten 67 \div 100=0.67 Write the numbers in the new form. If youre comparing the numbers, go to Step 4. \frac{2}{3}=\overline{0} \overline{0.667} rounded to the nearest hundredth is 0.67 0.67 You are not comparing the numbers, so you do not have to go to Step 4. Write the numbers in order from least to greatest. \frac{1}{2} \, \, 0.24,33 \%, \, \frac{7}{20} Choose a form (fraction, decimal, percentage). Change all the numbers to fractions with a denominator of 100. Convert the numbers to the form you chose. Change \, \frac{1}{2} \, and \, \frac{7}{20} \, so they have a denominator of 100. \frac{1}{2}=\frac{50}{2 \times 50}=\frac{50}{100} \frac{7}{20}=\frac{7 \, \times, \, 5}{20 \, \times, \, 5}=\frac{35}{100} 0.24 is twenty-four hundredths so can be written as \, \frac{24}{100} . 33% can be written as the fraction \, \frac{33}{100} . Write the numbers in the correct order. The numbers in order from least to greatest are: \frac{24}{100} \, \, 33% \, \cfrac{7}{20} \, \, \frac{50}{100} which is 0.24, \, 33%, \, \frac{7}{20}, \, \frac{1}{2} Write the numbers in the new form. If youre comparing the numbers, go to Step 4. The numbers are: \frac{1}{2} \, \{2}=\frac{50}{100} \frac{35}{100} 0.24=\frac{24}{100} 33%=\frac{33}{100} Write the numbers in the new form. If youre comparing the numbers, go to Step 4. Rewrite the fractions with a denominator of 100. \frac{1}{4}\ \rightarrow \, \frac{11}{4}=\frac{1 \, \times, \, 25}{4 \times 25}=\frac{25}{100} \frac{1}{5} \rightarrow \, \frac{2}{5} \times, \, \times, \, \times, \, 100 \, \times, \, 45 % \rightarrow \, \frac{45}{100} 0.18 times 100=18 \{ \rightarrow \, 18 \% Write the numbers in the new form. If youre comparing the numbers, go to Step 4. 45% \frac{40}{100} \, \, 40% 0.32 = 32% \frac{25}{100}=25% 0.18 = 18% Write the numbers in the correct order. The numbers in order from least to: 45 \%, 40 \%, 32 \%, 25 \%, 18 \% \, \rightarrow \, 45%, \, 0.32, \, \frac{1}{4} \, \{4}, \, 0.18 Write the numbers in the new form. If youre comparing the numbers, go to Step 4. 78 \%, 0.9, \cfrac{2}{3}, \, 61 % Choose a form (fraction, decimal, percentage). Change all the numbers to decimals. Convert the numbers to the form you chose. Divide the numerator by the denominator using long division, \overline{6}=66666\ldots 0.66666\ldots Rounded to the nearest hundredth is 0.67 To change the percents to decimals, divide the percent by 100 or move the decimal point two places to the left. 78 \%=\cfrac{78}{100}=78 \div 100 Using the rules of dividing by powers of ten, 78 \div 100 = 0.78 61 \%=\frac{61}{100}=61 \div 100 Using the rules of dividing by powers of ten, 61 \div 100 = 0.61 Write the numbers in the new form. If youre comparing the numbers, go to Step 4. \begin{aligned} & 61 \%=0.61, & & 78 \%=0.78 \\ & 0.9 \end{aligned} Write the numbers in the correct order. The numbers in order from least to greatest are: 0.61, \, 0.67, \, 0.78, \, 0.9 \, \rightarrow \, 61 \%, \, \cfrac{2}{3}, \, 78 \%, \, 0.9 Use visual models so students can see the connections between fractions, decimals, and percentages. Start by first converting the numbers into either fractions with a denominator of 100 or percentages. It is usually the easiest way for students to compare the numbers. Long division is useful when converting fractions and percentages to decimals, be sure to review the process with students. Fraction worksheets, decimal worksheets, and percent worksheets have their place, but using strategies to develop conceptual understanding is more meaningful to your learners. Not remembering the definition of a percentNot remembering the definition of a percent which is a fraction of 100. All percents can be written as a fraction over 100, which is useful when comparing fractions, decimals, and percents. Not remembering to make the denominator \bf{100} when comparing fractions, decimals, and percentsFor example, when converting 0.7 to a fraction, leave it as is, \, \frac{7}{10} instead of changing it to, \cfrac{70}{100}. Writing the answer in the wrong orderFor example, writing the numbers in ascending order means writing them from least to greatest. Writing the numbers in descending order means writing them from greatest to least. Original valuesNot giving the final answer in the values original form.For example, after converting the numbers to the same form to compare them, you forget to write the final answer using the original numbers and not the converted numbers. \cfrac{75}{100} = 5\% The definition of a percent is a fraction of 100. So, any fraction that has a denominator of 100 can easily be made into a percent by writing the numerator as the percent. \frac{1}{4}=\frac{1 \, \times, \, 25}{4 \, \times, \, 25}=\frac{25}{100} \, \, is 25% because a fraction with a denominator of 100 can be written as a percent, where the numerator represents the percent. 0.200=20%=\frac{20}{100} 2% as a fraction is \, \frac{2}{100} \, 0.02 (two-hundredths) as a fraction is \, \cfrac{2}{100}, \, and 0.02 as a fraction is \, \cfrac{2}{100} \, , which means 2% 0.02 as a fraction is \, \cfrac{2}{100} \, , which means 2% is the numerator, so 0.02 is not correct, because 0.5 < 0.8 \bigl(\cfrac{4}{5} \, \bigr) 80 % is not correct, because 0.5 \, \bigl(\cfrac{4}{5} \, \bigr) 80 % is not correct, because 80 > 0% \, \bigl(\cfrac{4}{5} \, \bigr) 80 % is not correct \frac{31}{100} \, , 0.3 \, \{ \rightarrow \, \frac{31}{100} Write the numbers in the same form (make them percents). Multiply 0.3 by 100 to make it a percent number. 0.3 \times 100 = 30 = 30%=\frac{31}{100}, \, is 31 % because your fraction over 100 can be written as a percent where the numerator represents the percent number. In order from least to greatest: 30%, \, 31%, \, 32% \, \, 0.3, \cfrac{31}{100} \, , \, 32%=\cfrac{7}{9} \, , \, 0.79 \, 70 \%, \, 0.79 70 \%, \, 0.79, \cfrac{7}{9}, \, 0.79, \cfrac{7}{9} \, , \, 70 \% Change the numbers to the same form (make them decimals). \cfrac{7}{9}=\overline{7} 9 \div 9 = 0.77777 rounded to the nearest hundredth is 0.78 . 70 \% is \cfrac{70}{100} = 70 \div 100=0.70 70 \div 100=0.70 The numbers in descending order are: 0.79, \, 0.78, \, 0.70 \{ \, 0.9 \, 0.78 \, is there a way to change a repeating decimal directly into a fraction? Yes, when you get into 8th grade math and high school math, there is an algebraic process you can use to directly convert a repeating decimal into a fraction.Step-by-step guide: Repeating decimal to fraction Can you always move the decimal point two decimal places right when converting a decimal number to a percent? Yes, when changing a decimal number to a percent you can always move the decimal point two places to the right. When converting a fraction to a percentYou learned from multiplying by powers of 10, multiplying by 100 is the same as moving the decimal point two places to the right. 0.27 \times 100=27 You can move the decimal point two decimal places to the right. Can you always move the decimal point two decimal places to the left when dividing by powers of ten you can always move the decimal point two decimal places to the left when dividing by 100. 65 \%=\cfrac{65}{100}=65\div 100 = 0.65 Can you convert improper fractions to percents? Yes, you can convert improper fractions to percents the same way you convert proper fractions to percents. For example, \cfrac{5}{4} can be converted to a percent by making the denominator 100. \cfrac{5}{4}, \, \frac{125}{100} = 125%. The percent will be greater than 100. Percent Compound measures Arithmetic Properties of equality At Third Space Learning, we specialize in helping teachers and school leaders to provide personalized math support for more of their students through high-quality, online one-to-one math tutoring delivered by subject experts. Each week, our tutors support thousands of students who are at risk of not meeting their grade-level expectations, and help accelerate their progress and boost their confidence. Find out how we can help your students achieve success with our math tutoring programs. We use essential and non-essential cookies to improve the experience on our website. Please read our Cookies Policy for information on how we use cookies and how to manage or change your cookie settings.AcceptPrivacy & Cookies Policy Download Article Download Article Converting numbers between percents, fractions, and decimals is a necessary basic math skill. The concepts are quite simple once you learn them. Not only will knowing how to convert small numbers help you on your test, but it is also useful for financial calculations. 1Move the decimal point two places to the left to convert a percent to a decimal. Unless otherwise noted, a percent is a fraction, the decimal point comes at the end of the last number. For example, envision that 75% actually looks like 75.0%. Moving the decimal point two places to the left converts the percent to a decimal. This is the same thing as dividing the number by 100. Examples:[1]75% converts to .753.1% converts to .0310.5% converts to 0.0052Express the percent as a fraction of 100. Writing a number as a fraction of 100 is simply another way to write a percent. The number of the percent becomes the numerator of the fraction and 100 becomes the denominator. Simplify the fraction to its lowest form.[2]Example: 36% turns to 36/100.[3]To simplify, look for the highest number that goes into both 36 and 100. In this case, that would be 4.Determine how many times 4 goes into 36 and 100. When you simplify, the answer would be 9/25.To check that youve converted correctly, divide 9 by 25 (0.36) and multiply by 100 (36%). This number should equal your original percent. Advertisement 3Remove the percent sign. Once the percent has been converted to a decimal or fraction, the % sign is no longer appropriate. Remember, percent just means per one hundred, so if you forget to remove the percent sign after converting, your answer will be off by multiplying.[5] Dont forget to add the percent sign after multiplying.[6] Examples include: 0.32 becomes 32%, 0.07 becomes 7%, 1.25 becomes 125%, 0.083 becomes 8.3%.2Convert a terminating decimal to a fraction. A terminating decimal is one that does not repeat. Move the decimal point as many places to the right as you have decimals. This number is now the numerator of the fraction. The denominator is a 1 with as many zeros as you had decimals in the original number. Simplify the fraction at the end.[7]For example: 0.32 has two decimal places. Move the decimal point to the right and divide by 10: 32/100. With a common factor of 4, the fraction simplifies to 8/25.Another example: 0.8 only has one decimal place. Move the decimal one place to the right and divide by 10: 8/10. With a common factor of 2, the fraction simplifies to 4/5.To check your work, simply divide out the fraction and make sure it equals your original decimal: 8/25 = 0.32.3Change a repeating decimal into a fraction. A repeating decimal is one that has a sequence of numbers that continually repeat. For example, 0.131313... is multiplied by 100 (to the power of 2) and we get 13.131313...To determine the numerator (top number), subtract out the repeating portion of the decimal. For example, 13.131313... - 0.131313... = 13, so the numerator is 13.[9]To determine the denominator (lower number), subtract 1 from the number you multiplied with. For example, 0.131313... was multiplied by 100, so the denominator is 100 - 1 = 99.The final fraction for 0.131313 is 13/99Additional Examples:0.333... becomes 3/90.123123123... becomes 123/9990.142857142857... becomes 142857/999999If necessary, take the fraction to its lowest form. For example, 142857/999999 becomes 1/7. Advertisement 1Divide the numerator by the denominator to change the fraction to a decimal. Interpret the fraction bar to mean "divided by". This means for any fraction x/y, it is the same as saying x divided by y.[10] For example: The fraction 4/8 yields the decimal 0.5.2Determine the number of decimal points. Many numbers dont divide evenly into each other. When you decide how many decimal places you want to give in your answer. Oftentimes, the standard is two places. Remember the rules of rounding when truncating a fraction: if the next number is a 5, round the previous number up. For example, 0.145 rounds to 0.15.For example: The fraction 5/17 yields the decimal 0.29411764705887he final decimal can be written simply as 0.29.3Divide the fraction and then multiply by 100 to change to a percent. Just as you did to convert the fraction to a decimal, divide the numerator by the denominator.[11] Multiply the resulting decimal by 100 and add a percent sign to finish the conversion.[12]If you had 4/8, dividing 4 by 8 would give you .50, then multiplying that number by 100 would give you 50. Adding a percent sign gives you your final answer by 50%.Additional Examples:3/10 = 0.30 * 100 = 30%5/8= 0.625 * 100 = 62.5% Advertisement Add New Question Question How do I convert 27 over 56 into a fraction? 27/56. Question What is 3 and 1 over 2 as a decimal? 3 = 3.5. Question What is 62.5 as a fraction? 62.5 (or the mixed number 62) is the equivalent of the improper fraction 625/10, which reduces to 125/2. 125 2 = 62.5. See more answers Ask a Question Advertisement Thanks Thanks Advertisement Paper and pencilA standard calculator Thanks for reading our article! If youd like to learn more about math, check out our in-depth interview with David Jia. David Jia is an Academic Tutor and the Founder of LA Math Tutoring, a private tutoring company based in Los Angeles, California. With over 10 years of teaching experience, David works with students of all ages and grades in various subjects, as well as college admissions counseling and test preparation for the SAT, ACT, ISEE, and more. After attaining a perfect 800 math score and a 690 English score on the SAT, David was awarded the Dickinson Scholarship from the University of Miami, where he graduated with a Bachelors degree in Business Administration. Additionally, David has worked as an instructor for online videos for textbook companies such as Larson Texts, Big Ideas Learning, and Big Ideas Math. This article has been viewed 525,982 times. Co-authors: 98 Updated: March 10, 2025 Views:525,982 Categories: Conversion Aids PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 525,982 times. "It helped me understand how to convert fractions, percent and decimals to scientific notation. What helped me the most was the given examples."..." more Share your story The process of conversion to percentage from a proper fraction and an improper fraction is same.There two types of processes in converting a fraction into percentage.Type 1 :Denominator can be convertible to 100 using multiplication.Type 2 :Denominator can not be convertible to 100 using multiplicationType 1If denominator of the proper fraction is convertible to 100 using multiplication, we can convert the given proper fraction to percent as explained in the example given below. If denominator of the improper fraction is convertible to 100 using multiplication, we can convert the given improper fraction to percent as explained in the example given below.If denominator of the proper fraction is not convertible to 100 using multiplication, we have to convert the given proper fraction into decimal. Then we have to convert decimal into percent as explained in the example given below.If denominator of the improper fraction is not convertible to 100 using multiplication, we have to convert the given improper fraction into decimal. Then we have to convert decimal into percent as explained in the example given below. Practice ProblemsConvert the following fractions to percentage.Problem 1 :3/4Solution :To convert any fraction to percentage, make the denominator as 100 using multiplication.In the fraction 3/4, the denominator is 4 which is convertible to 100 using multiplication by 4.3/4 = (3 25) / (4 25)= 75 / 100= 75%Problem 2 :10/3Solution :In the fraction 10/3, the denominator is 3 which can not be converted into 100 or 1000 using multiplication.So the given fraction can be converted into decimal using long division.Multiply 3.3333 by 100 to convert it to percentage.3.3333 X 100 = 333.33%Problem 3 :5/8Solution :To convert any fraction to percentage, make the denominator as 100 using multiplication.In the fraction 5/8, the denominator is 8 which which can not be converted into 100 using multiplication.But 8 can be converted into 1000 using multiplication by 125.Then,5/8 = (5 125) / (8 125)= 625/1000= 0.625Multiply 0.625 by 100 to convert it to percentage.0.625 X 100 = 62.5%Problem 4 :13/8Solution :To convert the given mixed number to improper fraction, first convert the given mixed number into improper fraction.3 1/8 = 25/8To convert any fraction to percentage, we have to make the denominator as 100 using multiplication. But 8 can be converted into 1000 using multiplication of 125.Then,25/8 = (25 125) / (8 125)= 3125 / 1000= 3.125Multiply 3.125 by 100 to convert it to percentage.3.125 100 = 312.5%Problem 5 :A rectangular pizza is cut into 20 pieces as shown. Chilli has been put on 4 pieces.a) What fraction of the pizza does not have chilli?b) What percentage of the pizza does not have chilli?c) What percentage of the pizza does have chilli?Solution :a) Total number of squares = 20Number of squares in which we have chillis = 4Number of squares that doesn't have chillis = 20 - 4= 16The fractions of pizza that does not have chilli = 16/20After the simplification, we get 4/5b) To convert this fraction as percentage, we have to multiply the above fraction by 100.= 4/5 100= 80%c) Percentage of window with chilli = 100 - 80%= 20% Apart from the stuff given above, if you need any other stuff in math, please use our google custom search here. A window consists of 16 panes of glass as shown. The outer 12 panes are coloured blue.a) What fraction of the window is blue?b) What percentage of the window is blue?c) What percentage of the window is not blue?Solution :a) Fraction part of window which are blue = 12Fraction of window which is blue = 12/16Doing the simplification, we get= 3/4b) Percentage of window which is not blue = (3/4) x 100= 3 x 25= 75%c) Percentage of window which is not blue = 100 - 75%= 25% Kindly mail your feedback to v4formath@gmail.comWe always appreciate your feedback.All rights reserved. onlinemath4all.comWondering how to turn a fraction into a percent or vice versa, it's very crucial that you understand what a percent is and how you can read percentages in performing calculations. Having said that, percent simply means "per one hundred" and is represented as %. Now, to convert a percent into a decimal, you need to divide by 100. This is just similar to moving the decimal by 100.[1] Multiply the resulting decimal by 100 and add a percent sign to finish the conversion.[12]If you had 4/8, dividing 4 by 8 would give you .50, then multiplying that number by 100 would give you 50. Adding a percent sign gives you your final answer by 50%.Additional Examples:3/10 = 0.30 * 100 = 30%5/8= 0.625 * 100 = 62.5% Advertisement Add New Question Question How do I convert 27 over 56 into a fraction? 27/56. Question What is 3 and 1 over 2 as a decimal? 3 = 3.5. Question What is 62.5 as a fraction? 62.5 (or the mixed number 62) is the equivalent of the improper fraction 625/10, which reduces to 125/2. 125 2 = 62.5. See more answers Ask a Question Advertisement Thanks Thanks Advertisement Paper and pencilA standard calculator Thanks for reading our article! If youd like to learn more about math, check out our in-depth interview with David Jia. David Jia is an Academic Tutor and the Founder of LA Math Tutoring, a private tutoring company based in Los Angeles, California. With over 10 years of teaching experience, David works with students of all ages and grades in various subjects, as well as college admissions counseling and test preparation for the SAT, ACT, ISEE, and more. After attaining a perfect 800 math score and a 690 English score on the SAT, David was awarded the Dickinson Scholarship from the University of Miami, where he graduated with a Bachelors degree in Business Administration. Additionally, David has worked as an instructor for online videos for textbook companies such as Larson Texts, Big Ideas Learning, and Big Ideas Math. This article has been viewed 525,982 times. Co-authors: 98 Updated: March 10, 2025 Views:525,982 Categories: Conversion Aids PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 525,982 times. Understanding how to convert between fractions, decimals, and percents can help you as you learn more advanced math.Fractions and decimalsEvery fraction can be written as a decimal, and vice versa. You may not do this very often, but it's a skill that's good to know. For example, we could describe the same car as tiny or little or small. All of these words mean the car is not big. Fractions, decimals, and percents are like the words tiny, little, and small. They're all just different ways of expressing parts of a whole. In this image, each measuring cup has the same amount of juice in it. But we've expressed this amount in three ways: as a fraction, as a percent, and as a decimal. Since they're expressing the same amount, we know that 1/2, 50%, and 0.5 are equal to each other. Any time we see 1/2, we know it could also mean 50% or 0.5 even though it doesn't look it. Learning how to convert fractions, decimals, and percents will help you as you learn more advanced math.Fractions and decimalsEvery fraction can be written as a decimal, and vice versa. You may not do this very often, but it's a skill that's good to know. For example, it's easier to convert 1/6 from 0.52 if you turn 1/6 into a decimal first.Converting a fraction into a decimalLet's convert a fraction into a decimal. We'll be using a math skill you've already learned: long division. To refresh your memory on this skill, you can review our Long Division lesson.Click through the slideshow to learn how to convert a fraction into a decimal.Let's see how we can convert 1/4 into a decimal.To convert a fraction into a decimal, we'll just divide the numerator...To convert a fraction into a decimal, we'll just divide the numerator...by the denominator.In our example, we'll divide 1 by 4. 1 divided by 4 equals 0.To keep dividing, we'll add a decimal point and a zero after the 1.We'll also add a decimal point after our 0 on top.Now we'll multiply 4 times 5 equals 20.When we subtract 20 from 20, we get 0. The 0 means we're done dividing.1 divided by 4 equals 0.25.So 1/4 is equal to 0.25.Try This!Convert each of these fractions into a decimal. Converting a decimal into a fractionNow we'll do it in reverse. Let's convert a decimal into a fraction.Click through the slideshow to learn how to convert a decimal into a fraction.We're going to rewrite 0.85 as a fraction. To convert a decimal into a fraction, we'll use place values.In decimals, the number immediately to the right of the decimal point is in the tenths place.The next place to the right is the hundredths place.This means our decimal is equal to 85 hundredths.85 hundredths can also be written as 85/100.Now we have our fraction. But it's always a good idea to reduce fractions when we can. This makes them easier to read.To reduce, we need to find the largest number that goes evenly into 85 and 100. So we'll divide both parts of our fraction by 5.First we'll divide the numerator. 85 divided by 5 equals 17.Now we'll divide the denominator. 100 divided by 5 equals 20. This means 85/100 can be reduced to 17/20.So 0.85 is equal to 17/20.Reducing a fraction might seem like an extra step, but it's important to do when converting a decimal into a fraction. But it's important if you're going to use this fraction in a math problem. If you're adding two fractions, you may even need to reduce or convert so they have a common denominator.Try This!Convert these decimals into fractions. Be sure to reduce each fraction to its simplest form! Percents and decimalsKnowing how to convert percents and decimals will help you calculate things like sales tax and discounts. To learn more, check out our Percentages in Real Life lesson.Converting a percent into a decimalConverting a percent into a decimal is surprisingly easy. It only takes a few simple steps.Click through the slideshow to learn how to convert a percent into a decimal.Let's see how we can convert 17% into a decimal.First, we'll take the percent sign...First, we'll take the percent sign...and turn it into a decimal point.In our example, we'll multiply by 4 divided 0.70 keep dividing, we'll add a decimal point.Then, we'll move the decimal point two spaces to the left.Then, we'll move the decimal point two spaces to the left.Notice there is an empty space next to the 8. We can't just leave an open space with nothing in it. Since zero equals nothing, we'll replace the empty space with zero.Notice there is an extra space next to the 8. We can't just leave an open space with nothing in it. Since zero equals nothing, we'll replace the space with zero.That's why 78% is equal to 0.78.Let's look at another example. This time we'll turn 8% into a decimal.First, we'll replace the percent sign with a decimal point.Then, we'll move the decimal point two spaces to the left.Notice there is an extra space next to the 8. We can't just leave an open space with nothing in it. Since zero equals nothing, we'll replace the space with zero.That's why 8% is equal to 0.08.Why does this work? Every time we just put the percent over 100. You may feel like you've missed something, but dont worry! It really is that simple! Here's why the method we showed you works.When we turn a percent into a decimal, we're actually doing two steps. First, we convert our percent into a fraction. Since all percents are out of 100, we just put the percent over 100. See 78%= 78/100In the second step, we convert 78/100 into a decimal. You already know this means we'll divide the numerator 78 by the denominator 100. 78 divided by 100 is 0.78. That's why 78% equals 0.78.In the second section, you learned. Let's convert a percent into a decimal.Click through the slideshow to learn how to convert a percent into a decimal.We're going to convert 0.45 into a percent.Click through the slideshow to learn how to convert a decimal into a percent.This time, we'll move the decimal point to the right.We'll reverse what we did in the last section. This time, we'll move the decimal point two places to the right.Now we'll replace the decimal point with a percent sign.We've finished converting 0.45 into a percent. 0.45 is equal to 45%.Let's try another example. This time we'll convert 0.2 into a percent.We'll move the decimal point two places to the right. Since 0.2 only has one place after the decimal point, we'll need to add a zero as we move the decimal point to the right.Now we'll replace the decimal point with a percent sign.We're going to convert 0.45 into a percent. 0.45 is equal to 45%.Let's try another section.This time, we'll move the decimal point to the right.We'll reverse what we did in the last section.Now we'll replace the decimal point with a percent sign.We've finished converting 0.45 into a percent. 0.45 is equal to 45%.Let's try another example. This time we'll convert 0.635 into a percent.First, we'll move the decimal point two places to the right.But we're still going to move the decimal point two places to the right.Now we'll replace the decimal point with a percent sign.So 0.635 is equal to 63.5%.Try This!Convert these decimals as percents. Percents and fractionsKnowing how to convert percents and fractions can help you in your everyday life. For example, let's say your teacher gave a test and 8 out of 10 questions right, the teacher can convert 8/10 to a percent and give the student a grade.Converting a percent into a fractionLet's say you scored a grade of 80% on a test. Your teacher gives the test, she may do the opposite. If a student got 8 out of 10 questions right, the teacher can convert 8/10 to a percent and give the student a grade.Converting a percent into a fractionLet's say you scored a grade of 80% on a test. Can you turn this into a fraction to find out how many of your answers were correct. When your teacher grades the test, she may do the opposite. If a student got 8 out of 10 questions right, the teacher can convert 8/10 to a percent and give the student a grade.Converting a percent into a fractionClick through the slideshow to learn how to convert a percent into a fraction.We're going to convert 30% into a fraction.In Introduction to Percents, you learned that all percents are out of 100. In fact, that's what the word percent means.So any percent is equal to itself out of 100. 30% is the same as 30/100.We could reduce that fraction if we wanted to, but we still need to reduce it.10 is the largest number that goes evenly into 30 and 100. So we can divide both parts of the fraction by 10.We'll divide the numerator 30 and the denominator 100.30 divided by 10 equals 3.Now we'll divide the denominator.100 divided by 10 equals 10.30/100 reduces to 3/10.So 30% is equal to 30/100.Now we have our fraction. Make sure to reduce each fraction to its simplest form.Converting a fraction into a percentConverting a fraction into a percent is a little different. We'll use another math skill you've already learned: division.Click through the slideshow to learn how to convert a fraction into a percent.Let's convert 3/6 into a percent.Just like when we converted a fraction into a decimal, we'll divide the numerator by the denominator. 3 divided by 6 equals 0.5.We've turned our fraction into a decimal. Now we'll turn the decimal into a percent by moving the decimal point two spaces to the right.0.50 is equal to 50%. So 3/6 is equal to 50%.Try This!Convert these fractions into percents. Decimals, Fractions and Percentages are just different ways of showing the same value: A Half can be written... ... as a fraction: 1⁄2 ... as a decimal: 0.5 ... as a percentage: 50% A Quarter can be written... ... as a fraction: 1⁄4 ... as a decimal: 0.25 ... as a percentage: 25% Here, have a play with it yourself: numbers/images/ani-frac-num-pct.js Here is a table of commonly used values shown in Percent, Decimal and Fraction form: Percent Decimal Fraction 1% 0.01 1/100 5% 0.05 1/20 10% 0.1 1/10 12½% 0.125 1/8 20% 0.2 1/5 25% 0.25 1/4 33⅓% 0.333... 1/3 50% 0.5 1/2 75% 0.75 3/4 80% 0.8 4/5 90% 0.9 9/10 99% 0.99 99/100 100% 1 125% 1.25 5/4 150% 1.5 3/2 200% 2 To convert from percent to decimal divide by 100 and remove the % sign. An easy way to divide by 100 is to move the decimal point 2 places to the left: From Percent To Decimal move the decimal point 2 places to the left Don't forget to remove the % sign! From Decimal To Percent move the decimal point 2 places to the right Don't forget to add the % sign! From Fraction To Decimal To convert a fraction to a decimal divide the top number by the bottom number: Divide 2 by 5: 2 ÷ 5 = 0.4 Answer: 2/5 = 0.4 To convert a decimal to a fraction needs a little more work. First, write down the decimal "over" the number 1:0.751Multiply top and bottom by 10 for every number afterthe decimal point (10 for 1 number, 100 for 2 numbers, and so on):In this case multiply by 100:0.751100Calculate:810Then Simplify the fraction: 34 To convert a fraction to a percentage divide the top number by the bottom number, then multiply the result by 100% First divide 3 by 8: 3 ÷ 8 = 0.375 Then multiply by 100%: 0.375 × 100% = 37.5% Answer: 3⁄8 = 37.5% To convert a percentage to a fraction, first convert to a percentage to a decimal (divide by 100), then use the steps for converting decimal to fractions (like above). Start with:80%First convert to a decimal=80/100:0.8Write down the decimal "over" the number 1:0.81Multiply top and bottom by 10 for every number after the decimal point (10 for 1 number, 100 for 2 numbers, and so on):In this case multiply by 10:0.8 10:810Calculate:810Then Simplify the fraction: 45 881, 1305,882, 1306,883, 1307,884, 1308,885, 1309,886, 1310 Copyright 2025 Rod Pierce Here Download Article Download Article Converting numbers between percents, fractions, and decimals is a necessary basic math skill. The concepts are quite simple once you learn them. Not only will knowing how to convert small numbers help you on your test, but it is also useful for financial calculations. 1Move the decimal point two places to the left to convert a percent to a decimal. Unless otherwise noted, a percent is a fraction, the decimal point comes at the end of the last number. For example, envision that 75% actually looks like 75.0%. Moving the decimal point two places to the left converts the percent to a decimal. This is the same thing as dividing the number by 100. Examples:[1]75% converts to .753.1% converts to .0310.5% converts to 0.0052Express the percent as a fraction of 100. Writing a number as a fraction of 100 is simply another way to write a percent. The number of the percent becomes the numerator of the fraction and 100 becomes the denominator. Simplify the fraction to its lowest form.[2]Example: 36% turns to 36/100.[3]To simplify, look for the highest number that goes into both 36 and 100. In this case, that would be 4.Determine how many times 4 goes into 36 and 100. When you simplify, the answer would be 9/25.To check that youve converted correctly, divide 9 by 25 (0.36) and multiply by 100 (36%). This number should equal your original percent. Advertisement 3Remove the percent sign. Once the percent has been converted to a decimal or fraction, the % sign is no longer appropriate. Remember, percent just means per one hundred, so if you forget to remove the percent sign after converting, your answer will be off by multiplying.[5] Dont forget to add the percent sign after multiplying.[6] Examples include: 0.32 becomes 32%, 0.07 becomes 7%, 1.25 becomes 125%, 0.083 becomes 8.3%.2Convert a terminating decimal to a fraction. A terminating decimal is one that does not repeat. Move the decimal point as many places to the right as you have decimals. This number is now the numerator of the fraction. The denominator is a 1 with as many zeros as you had decimals in the original number. Simplify the fraction at the end.[7]For example: 0.32 has two decimal places. Move the decimal point to the right and divide by 10: 32/100. With a common factor of 4, the fraction simplifies to 8/25.Another example: 0.8 only has one decimal place. Move the decimal one place to the right and divide by 10: 8/10. With a common factor of 2, the fraction simplifies to 4/5.To check your work, simply divide out the fraction and make sure it equals your original decimal: 8/25 = 0.32.3Change a repeating decimal into a fraction. A repeating decimal is one that has a sequence of numbers that continually repeat. For example, 0.131313... is multiplied by 100 (to the power of 2) and we get 13.131313...To determine the numerator (top number), subtract out the repeating portion of the decimal. For example, 13.131313... - 0.131313... = 13, so the numerator is 13.[9]To determine the denominator (lower number), subtract 1 from the number you multiplied with. For example, 0.131313... was multiplied by 100, so the denominator is 100 - 1 = 99.The final fraction for 0.131313 is 13/99Additional Examples:0.333... becomes 3/90.123123123... becomes 123/9990.142857142857... becomes 142857/999999If necessary, take the fraction to its lowest form. For example, 142857/999999 becomes 1/7. Advertisement 1Divide the numerator by the denominator to change the fraction to a decimal. Interpret the fraction bar to mean "divided by". This means for any fraction x/y, it is the same as saying x divided by y.[10] For example: The fraction 4/8 yields the decimal 0.5.2Determine the number of decimal points. Many numbers dont divide evenly into each other. When you decide how many decimal places you want to give in your answer. Oftentimes, the standard is two places. Remember the rules of rounding when truncating a fraction: if the next number is a 5, round the previous number up. For example, 0.145 rounds to 0.15.For example: The fraction 5/17 yields the decimal 0.29411764705887he final decimal can be written simply as 0.29.3Divide the fraction and then multiply by 100 to change to a percent. Just as you did to convert the fraction to a decimal, divide the numerator by the denominator.[11] Multiply the resulting decimal by 100 and add a percent sign to finish the conversion.[12]If you had 4/8, dividing 4 by 8 would give you .50, then multiplying that number by 100 would give you 50. Adding a percent sign gives you your final answer by 50%.Additional Examples:3/10 = 0.30 * 100 = 30%5/8= 0.625 * 100 = 62.5% Advertisement Add New Question Question How do I convert 27 over 56 into a fraction? 27/56. Question What is 3 and 1 over 2 as a decimal? 3 = 3.5. Question What is 62.5 as a fraction? 62.5 (or the mixed number 62) is the equivalent of the improper fraction 625/10, which reduces to 125/2. 125 2 = 62.5. See more answers Ask a Question Advertisement Thanks Thanks Advertisement Paper and pencilA standard calculator Thanks for reading our article! If youd like to learn more about math, check out our in-depth interview with David Jia. David Jia is an Academic Tutor and the Founder of LA Math Tutoring, a private tutoring company based in Los Angeles, California. With over 10 years of teaching experience, David works with students of all ages and grades in various subjects, as well as college admissions counseling and test preparation for the SAT, ACT, ISEE, and more. After attaining a perfect 800 math score and a 690 English score on the SAT, David was awarded the Dickinson Scholarship from the University of Miami, where he graduated with a Bachelors degree in Business Administration. Additionally, David has worked as an instructor for online videos for textbook companies such as Larson Texts, Big Ideas Learning, and Big Ideas Math. This article has been viewed 525,982 times. Co-authors: 98 Updated: March 10, 2025 Views:525,982 Categories: Conversion Aids PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 525,982 times. Understanding how to convert between fractions, decimals, and percents can help you as you learn more advanced math. The process and percentages in your GCSE Maths exams. Test your knowledge of Converting Between Fractions, Decimals and Percentages for GCSE Maths, with this quiz. /en/percents/percentages-in-real-life/content/ Converting Fractions, Decimals, and percentsWhen we talk, we often use different words to express the same thing. For example, we could describe the same car as tiny or little or small. All of these words mean the car is not big. Fractions, decimals, and percents are like the words tiny, little, and small. They're all just different ways of expressing parts of a whole. In this image, each measuring cup has the same amount of juice in it. But we've expressed this amount in three ways: as a fraction, as a percent, and as a decimal. Since they're expressing the same amount, we know that 1/2, 50%, and 0.5 are equal to each other. 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How do you convert fractions to decimals and percentages. How to do fractions decimals and percentages. How to convert between fractions decimals and percentages. Explain why it is important to understand how to convert between fractions decimals and percentages. Fractions percents decimals. How to convert fractions to decimals to percents. How to convert fractions into decimals and percentages. Why is it important to understand how to convert between fractions decimals and percentages.

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