

Math Rules Review

Rules for changing between percents, decimals, fractions, and ratios

<p>To change a fraction to a ratio, write the two numbers with a colon between them instead of the dividing line. <i>Example:</i> $1/5 = 1 : 5$</p> <p>To change a fraction to a decimal fraction, divide the numerator by the denominator. <i>Example:</i> $1/5 = 0.20$ (1 divided by 5)</p> <p>To change a fraction to a percent, divide the numerator by the denominator (use as many decimal places as needed); then move the decimal point two places to the right and add a percent sign. <i>Example:</i> $1/5 = 0.20 = 20\%$</p> <p>To change a percent to a decimal fraction, move the decimal point two places to the left and omit the percent sign. <i>Example:</i> $10\% = 0.10$</p> <p>To change a percent to a fraction, drop the percent sign, write the number as the numerator, with 100 as the denominator, and reduce to lowest terms. <i>Example:</i> $10\% = 10/100 = 1/10$</p> <p>To change a percent to a ratio, drop the percent sign, use the number as the first term, 100 as the second term, and reduce to the lowest terms; or change to a fraction and then use a colon instead of the dividing line. <i>Example:</i> $10\% = 10:100 = 1:10$ $10\% = 1/10 = 1:10$</p> <p>To change a decimal fraction to a percent, move the decimal point two places to the right (multiply by 100) and add the percent sign. <i>Example:</i> $0.20 = 20\%$</p> <p>Fractions Numerator - Top number in a fraction</p> <p>Denominator - Bottom number in a fraction</p> <p>Proper Fraction - numerator is smaller than the denominator. <i>Example:</i> $\frac{2}{3}$</p>	<p>To subtract fractions, subtract the numerators and leave the denominator the same. <i>Example:</i> $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$</p> <p>To subtract unlike fractions, change the denominators to same and then subtract the numerator. <i>Example:</i> To change a decimal fraction to a common fraction, omit the decimal point and place the number over the appropriate denominator or 10, 100, 1000. and reduce to lowest terms. <i>Example:</i> $0.20 = 20/100 = 1/5$</p> <p>To change a decimal fraction to a ratio, write the number as the first term, then put 10, 100, or 1000 as the second term; finally, reduce to the lowest terms. <i>Example:</i> $0.20 = 20$ to 100 or 1 to 5</p> <p>To change a ratio to a fraction, write the numbers with a dividing line instead of a colon. <i>Example:</i> $1 : 20 = 1/20$</p> <p>To change a ratio to a decimal fraction, divide the first term by the second term. <i>Example:</i> $1:20 = 0.05$</p> <p>To change a ratio to a percent, divide the first term by the second term, move the decimal point two places to the right in the answer, and add a percent sign. <i>Example:</i> $1:20 = 0.05 = 5\%$</p> <p>To change an improper fraction to a mixed number, divide the first term by the second term. <i>Example:</i> $36/7 = 5 \frac{1}{7}$</p> <p>To change a mixed number to an improper fraction, multiply the whole number by the denominator and then add the numerator.</p>
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<p>Improper fraction - numerator is larger than the denominator. <i>Example:</i> $\frac{2}{3}$</p> <p>Mixed fraction - whole number and a fraction. <i>Example:</i></p> <p>To add like fractions - (denominators are the same), add numerators together, denominator remains the same. <i>Example:</i> $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$</p> <p>To add unlike fractions, change the denominators to same and then add the numerators.</p>	<p><i>Example:</i> $5 \frac{1}{7} = 5 \times 7 = 35 + 1 = \frac{36}{7}$</p> <p>To multiply fractions, multiply the numerators together and then multiply the denominators and then reduce to lowest terms. <i>Example:</i></p> <p>To divide fractions, invert (flip upside down) the second fraction and then multiply straight across the numerators and the denominators. <i>Example:</i></p>
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