



Tristearin, also known as glyceryl tristearate, is a type of triglyceride, which is a fat molecule made up of glycerol backbone blant oils. Chemical formula \$\$C\_{57}H\_{110}O\_{6}\$\$C57H11006. Its structure consists of a glycerol backbone connected to three stearic acid molecules. Each stearic acid molecule is a long-chain fatty acid with 18 carbon atoms, making tristearin a saturated fat.Glycerol BackboneGlycerol is a simple polyol compound with the formula \$\$C\_{3}H\_{8}O\_{3}\$\$C3H8O3. It serves as the backbone for triglycerides, where each hydroxyl group (\$\$-OH\$\$OH) of glycerol is esterified with a fatty acid. Stearic AcidStearic acid, with the formula \$\$C {18}H {36}O {2}\$\$C18H36O2, is a saturated fatty acid chains, which makes them solid at room temperature. Physical Properties Tristearin is a solid at room temperature with a melting point of around 72C (162F). It is white and odorless, making it suitable for various industrial applications. Uses of Tristearin Food Industry tristearin is used as a hardening agent in the production of margarine and other spreads. It helps improve the texture and stability of these products. Cosmetics and PharmaceuticalsTristearin is also used in cosmetics and pharmaceuticals. It acts as an emulsifier, helping to blend ingredients that would otherwise separate, and as a thickening agent in creams and lotions. Candle MakingIn candle making, tristearin is used to harden paraffin wax, making the candles burn longer and more evenly. Industrial LubricantsTristearin is used as a lubricant in various industrial processes, including metalworking and plastic manufacturing. Health Consideration. Excessive intake of saturated fats can lead to health issues such as cardiovascular diseases. However, in small amounts, it is a part of a balanced diet. Conclusion Tristearin is a versatile triglyceride with applications ranging from food production to industrial uses. Its chemical structure, consisting of a glycerol backbone and three stearic acid molecules, makes it a solid, saturated fat. Understanding its properties and uses can help us appreciate the role of fats in various industries and our daily lives. The multiplicative inverse is defined as the reciprocal of a given number. It is used to simplify mathematical expressions. The word 'inverse' implies something opposite/contrary in effect, order, position, or direction. A number when multiplicative inverse is defined as the reciprocal of a given number. It is used to simplify mathematical expressions. The word 'inverse' implies something opposite/contrary in effect, order, position, or direction. multiplicative inverse of a number is defined as a number is 1. The multiplicative inverses of each other. The multiplicative inverse of a number is defined as the division of 1 by that number. It is also called the reciprocal of the numbers, fractions, unit fractions, unit fractions, negative numbers, etc. Let us understand the multiplicative inverse formula for each type of number. Natural numbers are counting numbers are counting from 1. The multiplicative inverse of a natural number a is 1/a. For example, 3 is a natural number a is 1/a. For example, 3 is a natural number a is 1/a. For example, 3 is a natural number a is 1/a. multiplicative inverse of positive integers, the product of a negative number is its reciprocal. For example, (-6) (-1/6) = 1, therefore, the multiplicative inverse of -6 is -1/6. Note that the multiplicative inverse of a negative number is always negative. And, in the multiplicative inverse of a FractionThe multiplicative inverse of a FractionThe multiplicative inverse of a fraction a/b is b/a = 1 when (a,b 0). For example, the multiplicative inverse of a fraction a/b is b/a because a/b b/a = 1 when (a,b 0). inverse of 2/7 is 7/2. If we multiply 2/7 by 7/2, the product is 1 (2/7 7/2 = 1). The multiplicative inverse of a unit fraction 1/x is 43/76 = 1. A unit fraction 1/x by x, the product is 1 (76/43 + 3/76 = 1). The multiplicative inverse of a unit fraction 1/x is 43/76 = 1. x.Examples: The multiplicative inverse of the unit fraction 1/50 is 50. If we multiply 1/7 by 7, the product is 1 (1/7 7 = 1). The multiplicative inverse of a Mixed Fraction To find the multiplicative inverse of a mixed fraction, convert the mixed fraction into an improper fraction, then determine its reciprocal. For example, let us find the multiplicative inverse of \(3\dfrac{1}{2}\) is 2/7. It is interesting to note that the multiplicative inverse of a mixed number is always a proper fraction whose value is less than 1. Multiplicative inverse, it is the number that when multiplicative inverse, it is the number that when multiplicative inverse of 0As per the definition of multiplicative inverse. inverse of 0 does not exist. We can also understand this using the properties of division which states that the division of any number by 0 is not defined. So, it does not exist. Multiplicative inverse property states that the product of a number with its reciprocal is always equal to 1. Look at the image given below where 1/n is the multiplicative inverse of the number n and 1 is the product. For example, let us consider 5 apples. Now, divide the apples into five groups of 1 each. To make them into groups of 1 each, we need to divide them by 5. Dividing a number by itself is equivalent to multiplying it by its multiplicative inverse. Hence, 5 5 = 5 1/5 = 1. Here, 1/5 is the multiplicative inverse of a number by 1. Step 2: The multiplicative inverse of a number using the following steps: Step 1: Divide the given number by 1. Step 2: Write it in the form of a fraction. Say, the reciprocal of a is 1/a. Step 3: Simplify and get the answer. Let us find the multiplicative inverse of 2/3. The reciprocal of 2/3 is 3/2. Multiplicative inverse of 2/3. The reciprocal of 2/3 is 3/2. Multiplicative inverse of 2/3. The reciprocal of 2/3 is 3/2. Multiplicative inverse of 2/3. The reciprocal of 2/3 is 3/2. Multiplicative inverse of 2/3 is 3/2. Multiplicative inverse of 2/3. where 3 is the real number and i2 is the imaginary number. The multiplicative inverse of a complex number Z is 1/Z. The reciprocal of this complex number Z is 1/Z. The reciprocal of this complex number Z is 1/Z. The reciprocal of this complex number Z is 1/Z. The reciprocal of this complex number Z is 1/Z. The reciprocal of this complex number Z is 1/Z. The reciprocal of this complex number is 1/3+i2. It can be simplified by multiplying and dividing it by 3-i2, such that: (3-i2)/((9-i22) = (3-3+i2. Follow the steps given below to find the multiplicative inverse of a complex number a + ib: Step 1: Write the reciprocal in the form of 1/(a+ib). Step 2: Multiply and divide this number  $b = a^2 - b^2$ , and  $i^2 = -1$ . Step 4: Simplify to the lowest form. Modular Multiplicative Inverse The modular multiplicative inverse of an integer p is another integer x such that the product px is congruent to 1 with respect to the modulus m. It can be represented as: px \(\equiv \) 1 (mod m). In other words, m divides px - 1 completely. Also, the modular multiplicative inverse of an integer p can exist with respect to the modulus m only if gcd(p, m) = 1.In a nutshell, the multiplicative inverses are as follows: TypeMultiplicative Inverse of 4 is 1/4Integerx, x 01/xMultiplicative Inverse of 4 is 1/4Integerx, x 01/xMultiplicative Inverse of 4 is -1/4Fractionx/y; x,y 0y/xMultiplicative Inverse of 2/7 is 7/2Unit Fraction1/x, x 0xMultiplicative Inverse of 1/20 is 20Tips and Tricks: The multiplicative inverse of a fraction can be obtained by flipping the numerator and denominator. The multiplicative inverse of 1 is 1. The multiplicative inverse of a mixed fraction can be obtained by converting the mixed fraction into an improper fraction and determining its reciprocal.Important NotesThe multiplicative inverse of a number is also called it's reciprocal.The product of a number and its multiplicative inverse is equal to 1. Related Topics: Example 1: A pizza is sliced into 8 pieces. Tom keeps 3 slices of the pizza at the counter and leaves the rest on the table for his 3 friends to share. What is the portion that each of his friends gets? Do we apply multiplicative inverse here?Solution:Since Tom ate 3 slices out of 8, it implies he ate 3/8th part of the pizza. The pizza left out = 1 - 3/8 = 5/85/8 to be shared among 3 friends 5/8 3. We take the multiplicative inverse of the divisor to simplify the division. 5/8 3/1 = 5/24 Answer: Each of Tom's friends will be getting a 5/24 portion of the left-over pizza. Example 2: The total distance from Mark's home to school is 3/4 of a kilometer in a minute. In how many minutes will he reach his school from home? Solution: Total distance from home to school is 3/4 of a kilometer. He can ride his cycle 1/3 kilometer in a minute. to cover the total distance = total distance / distance verify the answer, we will multiply -9/10 with its reciprocal and check if the product is 1.(-9/10) (-10/9) = 1. Answer: The multiplicative inverse of -9/10 is -10/9. View Answer > go to slidego visualizations. Book a Free Trial ClassFAQs on Multiplicative inverse of any number is another number that when multiplicative inverse of 2 is 1/2. It is also known as the reciprocal of a number. What is the Difference between Reciprocal and Multiplicative Inverse? Reciprocal and multiplicative inverses of each other. How to Calculate Multiplicative inverse? To find the multiplicative inverse? To find the multiplicative inverse of a number, we divide it by 1. So, the multiplicative inverse? of x is 1/x.What is the Multiplicative Inverse of 9 is 1/9.What is the multiplicative inverse of 9 is 1/9.What is the multiplicative inverse of 1 is 1 itself.What is the Multiplicative Inverse of 9.20 by -1/20, the product is 1. Therefore, the multiplicative inverse of 1 is 1 itself.What is the Multiplicative inverse of 9 is 1/9.What is the Multiplicative inverse of 1 is 1 itself. Therefore, the multiplicative inverse of -20 is -1/20.What is the Multiplicative Inverse of a rational number, x/y, where x,y 0 is y/x. For example, the multiplicative inverse of -2/3 is -3/2. We just flip the numerator and denominator to find the multiplicative inverse. What is the Multiplicative inverse is always one. For example, 9 1/9 = 1. Why do we Use Multiplicative inverse is always one. For example, 9 1/9 = 1. Why do we Use Multiplicative inverse is always one. multiplicative inverse is while solving division problems. While dividend. For example, 2 4 = 2 1/4 = 1/2. What is the Multiplicative Inverse of 0? The division by zero is not defined, therefore, the multiplicative inverse of 0? The division by zero is not defined. modular multiplicative inverse of an integer a is another integer x such that the product ax is congruent to 1 with respect to the modulus m. It can be represented as: ax \(\equiv \) 1 (mod m). The multiplicative inverse of a modulo m exists if and only if a and m are relatively prime, i.e. gcd(a, m) = 1.Q1: The reciprocal of a number is also known as its .Additive InverseMultiplicative IdentityAdditive IdentityAdditive IdentityAdditive IdentityAdditive Inverse of (2/3)3 is:27/8\$\$-8/27\$\$\$-27/8\$ 3i is:1/(4 + 3i) is:1/(4 + 3i) is because 1/5 = 1. We know this since one fifth of 5 is 1. The multiplicative inverse of a unit fraction is simply the denominator. This means that if the fraction numerator is 1, the multiplicative inverse of 1/5 is 5. This is because 1/5 = 1. We know this since one fifth of 5 is 1. The multiplicative inverse of a unit fraction is simply the denominator. The multiplicative inverse of a number is what you multiplicative inverse of 2 is 1. How to Find the numerator and denominator. For a whole number, the multiplicative inverse of 2/3 is 3/2 and the multiplicative inverse of 3 is 1/3. The multiplicative inverse of 3 is 1/3. The multiplicative inverse of a number is the value that we multiply it by to make an answer of 1. When we multiply a number by its multiplicative inverse, the answer must be equal to 1. To find the reciprocal of a fraction, switch the numerator on top with the denominator on the bottom. The fraction state answer is 1 and so, they are multiplicative inverses of each other. Multipling the numerators we get 6 and multiplying the denominators we get 6. 6 out of 6 is one whole. In this example, one third of 3 is 1 and so, 3 and 1/3 are multiplicative inverses of each other. Here are some examples of finding the multiplicative inverses of each other. How to Find the Multiplicative Inverse of a Fraction The multiplicative inverse of a fraction is its reciprocal. This means that the numerator and denominator of 5/7 is 7/5. We can see that we simply switch the numerator and denominator of a fraction to make the multiplicative inverse. It does not matter how large the numerator of a fraction is. The multiplicative inverse of 9/2 is 2/9. The multiplicative inverse of a proper fraction is an improper fraction and the multiplicative inverse of a unit fraction. For any unit fraction. For any unit fraction 1/n, the multiplicative inverse of a Unit Fraction 1/n, the multiplicative inverse of a Unit fraction. For any unit fraction 1/5 is 5 because 1/5 5 = 1. A unit fraction must have a denominator of 1. The rule for finding the multiplicative inverse of a unit fraction is true for all unit fraction below. One fifth of 5 is 1. How to Find the Multiplicative inverse of a unit fraction is true for all unit fraction below. fraction equal to 1 over that number. For any whole number n, the multiplicative inverse of 2 is 1/2 because one half of 2 is 1. To find the multiplicative inverse of 3 is 1/7. This is because of 3 is 1/7. This is because 7 1/7 = 1. The multiplicative inverse of 3 is 1/1. This is because 13 1/13 = 1 Multiplicative Inverse of a Negative Number is also negative number is also negative. This is because the two negatives must cancel out when multiplicative inverse of 2/5 is 5/2 because 2/5 5/2 = 1. The multiplicative inverse of a negative number is the value we multiplicative inverse of 2/5 is 5/2 because 2/5 5/2 = 1. The multiplicative inverse of 2/5 is 5/2 because 2/5 5/2 = 1. The multiplicative inverse of a negative number is also negative. 1. For a fraction, the multiplicative inverse is simply the reciprical of the fraction. Below is an example of a negative fraction. We switch the numerator and denominator to find the reciprical. The multiplicative inverse of a negative fraction. We switch the numerator and denominator to find the reciprical of the fraction. We switch the numerator and denominator to find the reciprical of the fraction. multiplied by its multiplicative inverse, the answer must be positive 1. Here is another example. We will find the multiplicative inverse of 3 is 1/3. This is because one third of 3 is 1. The multiplicative inverse of -3 is 1/3. This is because one third of 3 is 1. number to make a positive answer. What is the Multiplicative inverse of 1 is 1 itself. The only number that 1 can be multiplicative inverse of 1 is 1. 1 is the multiplicative inverse of 1. 1 can be written as a fraction as 1/1. To find the reciprocal of 1/1 is 1/1, which is the numerator becomes the denominator and vice versa. The reciprocal of 1 is 1. What is the Multiplicative inverse of Zero? There is no multiplicative inverse of zero. This is because there is no number that zero can be multiplied by to make 1. Zero is the only number that does not have a multiplicative inverse. , the free encyclopedia that anyone can edit.107,747 active editors 7,024,400 articles in EnglishLieutenant-General Henry de Hinuber (17671833) was a Hanoverian army officer who commanded units of the King's German Legion (KGL) during the Napoleonic Wars. Initially serving in the Hanoverian Army, in 1782 he fought in the Second Anglo-Mysore War in India. He was present at the siege of Cuddalore. The French Revolutionary Wars began a decade later and Hinuber served in the Flanders Campaign. When Hanover was invaded in 1803, Hinuber offered his services to the British Army and was given command of the 3rd Line Battalion of the KGL before commanding a brigade in 1809. He was promoted to major-general in 1813. Hinuber commanded his brigade at the Battle of Nivelle in 1813 and then at the siege of Bayonne the following year, when he led the response to the French counter-attack. He joined the army of the new Kingdom of Hanover in 1816. He received his last command in 1831, of the 2nd Division of a corps of the German Federal Army, and died in Frankfurt two years later. 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The International Criminal Court issues arrest warrants for Taliban leaders Hibatullah Akhundzada and Abdul Hakim Haqqani over their alleged persecution of women in Afghanistan. Flooding in Central Texas, United States, leaves at least 140 people dead. Ongoing: Gaza warRussian invasion of UkrainetimelineSudanese civil wartimelineRecent deaths: Felix BaumgartnerFauja SinghBradley John MurdochFrank BarrieIhor PokladGlen MichaelNominate an articleJuly 18Nadia Comneci on the balance beam1290 King EdwardI issued an edict to expel all Jews from England.1723 Johann Sebastian Bach directed the first performance of his cantata Erforsche mich, Gott, und erfahre mein Herz in Leipzig.1976 At the Olympic Games in Montreal, Nadia Comneci (pictured) became the first person to score a perfect10 in a modern Olympics gymnastics event.1989 American actress Rebecca Schaeffer was shot and killed by Robert John Bardo, eventually prompting the passage of antistalking laws in California.1995 Selena's album Dreaming of You, instrumental in popularizing Tejano music, was released posthumously. Benito Jurez (d.1872)Richard Branson (b.1950)M.I.A. (b.1975)Amy Gillett (d.2005)More anniversaries: July 17July 18July 19ArchiveBy emailList of days of the yearAboutPainted batThere are 30 extant kerivouline species, which are members of Kerivoulinae, one of the four subfamilies of Vespertilionidae, itself one of twenty families of bats in the mammalian order. Kerivoulines, or woolly bats, are found in Africa and Asia, primarily in forests and caves, though some species can also be found in grasslands, savannas, or wetlands. They range in size from the least woolly bat, at 2cm (1in) tail, to the Kachin woolly bat, at 6cm (2in) plus a 7cm (3in) tail. The 30 extant species of Kerivoulinae are divided between two genera, with 26 species in Kerivoula and the remaining four in Phoniscus. (Fullist...)Recently featured: Accolades received by Inception1956 Summer Olympics medal tableMunicipalities in Prince Edward IslandArchiveMore featured listsThe Basilica of StPaul is a Catholic parish church was built between 1653 and 1658, replacing a church that was completed in 1578. It was constructed with funds from the noblewoman Cosmana Navarra, on plans prepared by Francesco Buonamici. The final stages were carried out completed by Lorenzo Gaf. It was elevated to the status of a minor basilica in 2020. The church features a grotto where, according to tradition, Paul the Apostle lived and preached during his three-month stage in Malta in AD60. This photograph shows the facade of the Basilica of StPaul in 2021. Photograph credit: Diego DelsoRecently featured: Clouded ApolloAnne of ClevesRosencrantz and GuildensternArchiveMore featured pictures. Village pump Forum for discussions about Wikipedia itself, including policies and technical issues. 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Find sources: "1290" news death categoriesBirths DeathsEstablishments and disestablishments CategoriesEstablishments Disestablishments Disestablishments and literature1290 in various calendar6040Balinese saka calendar12111212Bengali calendar696697Berber calendar2240English Regnal vear18Edw.119E Samvat12111212- Kali Yuga43904391Holocene calendar12901gbo calendar12901gbo calendar688689Japanese calendar688689Japanese calendar688689Japanese calendar688689Japanese calendar622 before ROC622Nanakshahi calendar18321833Tibetan calendar688689Japanese calendar688689Japanes Earth-Ox)1416 or 1035 or 263to(male Iron-Tiger)1417 or 1036 or 264 King Andrew III (r. 12901301)Year 1290 (MCCXC) was a common year starting on Sunday of the Julian calendar.July 10 King Ladislaus IV of Hungary ("the Cuman") is assassinated at the castle of Krsszeg (modern Romania). He is succeeded by Andrew III ("the Venetian"), after an election by Hungarian nobles, who is crowned by Archbishop Lodomer as new ruler of Hungary and Croatia in Szkesfehrvr on July 23.[1][2]December 18 King Magnusson"). Although, Sweden is an elective monarchy, Birger had already been appointed heir to the throne in 1284. July 18 Edict of Expulsion: King Edward I of England ("Longshanks") orders all Jews (at this time probably numbering around 2,000) to leave the country by November 1 (All Saints' Day[3]). The edict was decreed on Tisha B'Av on the Hebrew calendar, a day that commemorates many calamities. They are eventually allowed back in 1656. September The 7-year-old Margaret, Maid of Norway, queen-designate and heir to the crown of Scotland, a succession crisis. November 28 Eleanor of Castile, wife of Edward I, dies while traveling in the North. She has been suffering from illness for some time, and the cold and dampness of the winter months probably aggravate her condition. December Edward I travels with the body of Queen Eleanor from Lincoln to London. Remembering his wife, Edward erects a series of crosses at each location that the body rests overnight. These are known as the twelve Eleanor crosses.Winter The second of the Statutes of Mortmain passed during the reign of Edward I prevents land from passing into the practice of subinfeudations. The statute allows land to be sold according to royal approval, as long as the new owner answers directly to his lord or the king June Genoa concludes a new commercial treaty with the Mamluks; five galleys sent by King James II of Aragon ("the Just") join the Venetian Crusader fleet (some 20 ships) on its way to Acre. On board the fleet are Italian urban militias and mercenary forces under Seneschal Jean I de Grailly, who have fought for the Papal States in the so-called Italian Crusades. [4] August Italian Crusaders massacre Muslim merchants and peasants, and some local Christians in Acre. Some claim it began at a drunken party others that a European husband found his wife making love to a Muslim. The barons and local knights try to rescue a few Muslims and take them to the safety of the castle, while some ringleaders are arrested.[5]August 30 Survivors and relatives of the massacre at Acre take bloodstained clothing to Sultan Qalawun ("the Victorious") in Cairo, who demands that the leaders of the rint be handed over for trial, but the nobles refuse to send them and Qalawun now obtains legal clearance from the religious authorities in Cairo to break the truce with Crusader states.[6]October Qalawun orders a general mobilization of the Mamluk forces. In a council, it is decided that a peace delegation be sent to Cairo under Guillaume de Beaujeu, Grand Master of the Knights Templar. However, Qalawun demands huge compensation for those killed in Acre and sends a Syrian army to the coast of Palestine, near Caesarea.[7]November 10 Qalawun ("the Victorious") dies as the Egyptian Mamluk army sets out for Acre. He is succeeded by his eldest son Al-Ashraf Khalil as ruler of the Mamluk Sultanate. Khalil orders his allies and tributaries in Syria to prepare for a campaign next spring. Governors and castle commanders are ordered to assemble siege equipment and armor.[8]June 13 Shamsuddin Kayumars, Mamluk ruler of the Delhi Sultanate, is murdered and succeeded by Jalal-ud-din Khalji (or Firuz Shah I), founder of the Khalji arthquake affects the province of Zhili in China, with a maximum Mercalli intensity of IX (Violent), killing 7,270100,000 people. June 8 Beatrice Portinari, muse of the Italian poet Dante Alighieri, dies in Florence. In his Divine Comedy (La Divina Commedia), he transforms his memory of Beatrice into an allegory of divine love. [10] "Year without winter" An exceptionally rare instance of uninterrupted transition, from autumn to the following spring, in England and the mainland of Western Europe.[11]March 1 The University of Coimbra is founded in Lisbon by Denis I ("the Poet King"). He decrees that Portuguese is the official language of Portugal, replacing classical Latin in that capacity. The Dnyaneshwari is written in India. This holy book is a commentary on the Bhagvad Gita and is narrated by Dnyaneshwar. January 6 Otto Bodrugan, English landowner and politician (d. 1331)June 23 Jakushitsu Genk, Japanese Rinzai master and poet (d. 1367)August 4 Leopold I, Duke of Austria ("the Glorious"), German nobleman (d. 1326)October 15 Anne of Bohemia, gueen consort of Bohemia (d. 1313)December 24 Khwaju Kermani, Persian poet and mystic (d. 1349)Agnes Haakonsdatter, Norwegian noblewoman and princess (d. 1319)Andrea Pisano (or Pontedera), Italian sculptor and architect (d. 1348)Barlaam of Seminara, Italian cleric, scholar and theologian (d. 1348)Beatrice of Silesia, queen of Germany (House of Piast) (d. 1322)Buton Rinchen Drub, Tibetan Buddhist monk, disciple and poet (d. 1366)Giovanni Visconti, Italian cardinal, archbishop and co-ruler (d. 1354)Guido Gonzaga, Italian nobleman and knight (condottiero) (d. 1369)Hugues Quiret, French nobleman, admiral and advisor (d. 1340)Jacob van Artevelde, Flemish merchant and statesman (d. 1345)Jacopo Dondi dell'Orologio, Italian doctor and polymath (d. 1359)Johannes de Muris, French mathematician and astronomer (d. 1344)John Maltravers, English nobleman, knight and governor (d. 1364) John Parricida, German nobleman (House of Habsburg) (d. 1312) Jyotirishwar Thakur, Indian playwright, poet and writer (d. 1330) Ke Jiusi, Chinese landscape painter and calligrapher (d. 1327) Peter of Castile, Lord of Cameros, Spanish nobleman and prince (infante) (d. 1319)Pierre Bersuire (or Bercheure), French translator and encyclopaedist (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1362)Rudolf 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1266)June 13 Shamsuddin II, Mamluk ruler of the Delhi Sultanate (b. 1258)July 10 Ladislaus IV ("the Cuman"), king of Hungary and Croatia (b. 1262)September 26 Margaret, Maid of Norway, queen of Scotland (b. 1283)November 10 Qalawun ("the Victorious"), Mamluk ruler of Egypt (b. 1222)November 28 Eleanor of Castile, queen consort of England (b. 1241)December 21 Gerhard I, Count of Holstein-Itzehoe, German nobleman (b. 1242)Magnus III (or I) ("Birgersson"), king of Sweden (b. 1240)December 21 Gerhard I, Count of Holstein-Itzehoe, German nobleman (b. 1241)December 20 Eleanor of Castile, queen consort of England (b. 1241)December 20 Eleanor of Castile, queen consort of England (b. 1241)December 21 Gerhard I, Count of Holstein-Itzehoe, German nobleman (b. 1241)December 20 Eleanor of Castile, queen consort of England (b. 1241)December 20 Eleanor of Castile, queen consort of England (b. 1241)December 20 Eleanor of Castile, queen consort of England (b. 1241)December 20 Eleanor of Castile, queen 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Cuman, queen of Hungary (House of Arpad) (b. 1244)Fakhr al-Din Mustawfi, Persian finance minister, advisor and vizier^ Engel, Pl (2001). The Realm of St Stephen: A History of Medieval Hungary, 8951526. I.B. Tauris Publishers. p.110. ISBN1-86064-061-3.^ Bartl, Jlius; iaj, Viliam; Kohtova, Mria; Letz, Rbert; Sege, Vladimr; kvarna, Duan (2002) Slovak History: Chronology & Lexicon. Bolchazy-Carducci Publishers, Slovensk Pedegogick Nakladatel'stvo. p.34. ISBN0-86516-444-4. Mundill, Robin R. (2002). England's Jewish Solution: Experiment and Expulsion, 1262-1290. Cambridge University Press. ISBN0-521-52026-6. David Nicolle (2005). Osprey: Acre 1291 - Bloody sunset of the Crusader states, p. 49. ISBN978-1-84176-862-5. Steven Runciman (1952). A History of The Crusades. Vol III: The Kingdom of Acre, p. 343. ISBN978-0-241-29877-0. David Nicolle (2005). Osprey: Acre 1291 - Bloody sunset of the Crusades. Vol III: The Kingdom of Acre, p. 343. ISBN978-0-241-29877-0. Steven Runciman (1952). A History of The Crusades. Vol III: The Kingdom of Acre, p. 344. ISBN978-0-241-29877-0. Steven Runciman (2005). Cassell's Chronology of World History, p. 151 (2005). Cassell's Chronology of World History, p. 80. Primus Books. ISBN 978-0-241-29877-0. ISBN0-304-35730-8.^ Kington, J. Climate and Weather. HarperCollins Publishers, 2010.Retrieved from " 3One hundred years, from 1101 to 1200See also: Renaissance of the 12th century13thcent leaders11thcentury12thcentury13thcentury13thcentury13thcenturyDecades1100s1110s1120s1130s1140s1150s1160s1170s1180s1190sCategories:Births Deaths Establishments Disestablishments Disestablishmen culture, this period is considered part of the High Middle Ages and overlaps with what is often called the "Golden Age' of the Cistercians". The Golden Age' of the Cistercians". The Golden Age of Islam experienced significant development, particularly in Islamic Spain. In Song dynasty China, an invasion by Jurchens caused a political schism of north and south. The Khmer Empire of Cambodia flourished during this century, while the Fatimids of Egypt were overtaken by the Ayyubid dynasty. Following the expansions of the Ghaznavids and Ghurid Empire, the Muslim conquests in the Indian subcontinent took place at the end of the century. Main article: 1100sThe Ghurid Empire, the Muslim conquests in the Indian subcontinent took place at the end of the century. Main article: 1100sThe Ghurid Empire, the Muslim conquests in the Indian subcontinent took place at the end of the century. Treaty of Alton is signed between Henry I of England and his older brother Robert, Duke of Normandy in which Robert agrees to recognize Henry as king of England in exchange for a yearly stipend and other concessions. The agreement temporarily ends a crisis in the succession of the Anglo-Norman kings.11011103: David the Builder takes over Kakheti and Hereti (now parts of Georgia).1102: King Coloman unites Hungary and Croatia under the Builder in Urbnisi to reorganize the Georgian Orthodox Church.1104: In the Battle of Ertsukhi, King David the Builder defeats and army of Seljuks.1104: King Jayawarsa of Kadiri (on Java) ascends to the throne.[citation needed]1106: Battle of Tinchebray.11071111: Sigurd I of Norway becomes the first Norwegian king to embark on a crusade to the Holy Land. He fights in Lisbon and on various Mediterranean isles and helps the King of Jerusalem to take Sidon from the Muslims.1108: By the Treaty of Devol, signed in September, Bohemond I of Antioch has to submit to the Byzantine Empire, becoming the vassal of Alexius I.1109: In the Battle of Nako, Boleslaus III Wrymouth defeats the Pomeranians and re establishes Polish access to the sea.1109: On August 24, in the Battle of Hundsfeld, Boleslaus III Wrymouth defeats Emperor Henry V's first expedition to Rome, he is crowned Holy Roman Emperor.1113: Paramavishnulok is crowned as King Suryavarman II in Cambodia. He expands the Khmer Empire and builds Angkor Wat during the first half of the century. He establishes diplomatic relations with the Muslims.1115: In Java, King Kamesvara of Kadiri ascends to the throne. Janggala ceases to exist and comes under Kadiri domination, highly possible under royal marriage. During his reign, Mpu Dharmaja writes Kakawin Smaradahana, a eulogy for the king which become the inspiration for the Panji cycle tales, which spread across Southeast Asia.[1]1116: The Byzantine army defeats the Turks at Philomelion.1116: Death of doa Jimena Daz, governor of Valencia from 1099 to 1102.c. 1119: The Knights Templar are founded to protect Christian pilgrims in Jerusalem. Main article: 1120sA Black and White Photo of the 12th century Cuenca Cathedral (built from 1182 to 1270) in Cuenca, Spain1120: On January 16, the Council of Nablus, a council of ecclesiastic and secular lords in the crusader Kingdom of Jerusalem, establishes the first written laws for the kingdom.1120: On November 25, William Adelin, the only legitimate son of King Henry I of England, drowns in the White Ship Disaster, leading to a succession crisis which will bring down the Norman monarchy of England.1121: On August 12, in the Battle of Didgori, the greatest military victory in Georgian history, King David the Builder with 45,000 Georgians, 15,000 Kipchak auxiliaries, 500 Alan mercenaries and 100 French Crusaders defeats a much larger Seljuk-led Muslim coalition army.1121: On December 25, St. Norbert and 29 companions make their solemn vows in Premonstratensian Order.1122: The Battle of Beroia (Modern-day Stara Zagora, Bulgaria) results in the disappearance of the Pechenegs Turkish tribe as an independent force.1122: On September 23, the Concordat of Worms (Pactum Calixtinum) is drawn up between the papacy and the Holy Roman Empire.1122: King David the Builder captures Tbilisi and declares it the capital city of Georgia, ending 400 years of Arab rule.1123: The Jurchen dynasty of China forces Koryo (now Korea) to recognize their suzerainty.1124: In April or May, David I is crowned King of the Scots.1125: On June 11, in the Battle of Azaz, the Crusader states, led by King Baldwin II of Jerusalem, defeat the Seljuk Turks.1125: In November, the Jurchens of the Jin dynasty declare war on the Song dynasty, beginning the great struggle between Guelphs and Ghibellines.1127: The Northern Song dynasty loses power over northern China to the Jin dynasty.1128: On June 24, the Kingdom of Portugal gains independence from the Kingdom of Len at the Battle of So Mamede; (recognised by Len in 1143). Main article: 1130sThe temple complex of Angkor Wat, built during the reign of Suryavarman II in Cambodia of the Khmer Era.11301180: 50-year drought in what is now the American Southwest.11301138: Papal schism, Pope Innocent II vs. Antipope Anacletus II.1130: On March 26, Sigurd I of Norway dies. A golden era of 95 years comes to an end for Norway dies. A golden era of 95 years comes to an end for Norway dies. remainder of the century.1130: On Christmas Day, Roger II is crowned King of Sicily, the royal title being bestowed on him by Antipope Anacletus II.1132: The Southern Song dynasty establishes China's first permanent standing navy, although China had a long naval history prior. The main admiral's office is at the port of Dinghai.11321183: the Chinese navy increases from a mere 3,000 to 52,000 marine soldiers stationed in 20 different squadrons. During this time, hundreds of treadmill-operated paddle wheel craft are assembled for the navy to fight the Jin dynasty in the north.1135: King Jayabaya of Kadiri ascends to the throne.[2]11351154: The Anarchy takes place, during a period of civil war in England.1136: Suger begins rebuilding the abbey church at St Denis north of Paris, which is regarded as the first major Gothic building.1137: On July 22, the future King Louis VII of France marries Eleanor, the Duchess of Aquitaine.1138: On October 11, the 1138 Aleppo earthquake devastates much of northern Syria.1139: in April, the Second Lateran Council ends the papal schism.1139: On July 5, in the Treaty of Mignano, Pope Innocent II confirms Roger II as King of Sicily, Duke of Apulia, and Prince of Capua and invests him with his titles.1139: On July 25, the Portuguese defeat the Almoravids led by Ali ibn Yusuf in the Battle of Ourique; Prince Afonso Henriques is acclaimed King of Portugal by his soldiers. Main article: 1140sAverroes in a 14th-century painting by Andrea di Bonaiuto11401150: Collapse of the Ancestral Puebloan culture at Chaco Canyon (modern-day New Mexico).1141: The Treaty of Shaoxing ends the conflict between the Jin dynasty and Southern Song dynasty, legally establishing the boundaries of the two countries and forcing the Song dynasty to renounce all claims to its former territories north of the Huai River. The treaty reduces the Southern Song into a quasi-tributary state of the Jurchen Jin dynasty.1143: Manuel I Komnenos is crowned as Byzantine emperor after the death of John II Komnenos.1143: Afonso Henriques is proclaimed King of Portugal by the cortes.1143: The Treaty of Zamora recognizes Portuguese independence from the Kingdom of Len. Portugal also recognizes the suzerainty of the pope.1144: On October 25, the fourmonth-long Siege of Lisbon successfully brings the city under definitive Portuguese control, expelling the Moorish overlords.1147: A new Berber dynasty, the Almohads, led by Emir Abd al-Mu'min, takes North Africa from the Almoravides and soon invades the Iberian Peninsula. The Almohads began as a religious movement to rid Islam of impurities.1147: The Wendish Crusade against the Polabian Slavs (or "Wends") in what is now northern and eastern Germany. Main article: 1150s1150: Ramon Berenquer IV, Count of Barcelona, the Queen of Aragon.1151: The Treaty of Tudiln is signed by Alfonso VII of Len and Raymond Berenquer IV, Count of Barcelona, recognizing the Aragonese conquests south of the Jcar and the right to expand in and annex the Kingdom of Murcia.1153: The First Treaty of Wallingford, ends the civil war between Empress Matilda and her cousin King Stephen of England fought over the English crown. Stephen acknowledges Matilda's son Henry of Anjou as heir.1153: The First Treaty of Constance is signed between Emperor Frederick I and Pope Eugene III, by the terms of which, the emperor is to prevent any action by Manuel I Comnenus to reestablish the Byzantine Empire on Italian soil and to assist the pope against his enemies in revolt in Rome.1154: the Moroccan-born Muslim geographer Muhammad al-Idrisi publishes his Geography.1154: On December 27, Henry II is crowned King of England at Westminster Abbey.1155: Pope Adrian IV grants overlordship of Ireland to Henry II of England in the bull Laudabiliter.1156: On June 18, the Treaty of Benevento is entered into by Pope Adrian IV and the Norman Kingdom of Sicily. After years of turbulent relations, the popes finally settles down to peace with the Hauteville kings. The kingship of William I is recognized over all Sicily, Apulia, Calabria, Campania, and Capua. The tribute to the pope of 600 schifati agreed upon by Roger II in 1139 at Mignano is affirmed and another 400 shift is added for the new lands. 1158: The Treaty of Sahagn ends the war between Castile and Len.Main article: 1160sThe Liuhe Pagoda of Hangzhou, China, 11651161: the Song dynasty Chinese navy, employing gunpowder bombs launched from trebuchets, defeats the enormous Jin dynasty navy in the East China Sea in the Battle of Tangdao and on the Yangtze River in the Battle of Caishi.1161: Kilij Arslan II, Sultan of Rum, makes peace with the Byzantine Empire, recognizing the emperor's primacy.1161: In the siege of Ani, troops from the Kingdom of Georgia take control over the city, only to have it sold for the second time to the Shaddadids, a Kurdish dynasty.1162: Genghis Khan, the founder of the Mongol Empire, is born as Temjin in present-day Mongolia.1163: The Norwegian Law of Succession takes effect.11651182: Tensions and disputes between the Pagan Empire and the Kingdom of Polonnaruwa causes the Sinhalese under Parakramabahu the Great to raid Burma.1168: King Valdemar I of Denmark conquers Arkona on the Island of Rgen, the strongest pagan fortress and temple in northern Europe.1169: Political disputes within the Pandya Empire sparks the decade-long Pandyan Civil War.1169: On May 1, the Norman invasion of Ireland begins. Richard fitzGilbert de Clare ('Strongbow') allies with the exiled Irish chief, Dermot MacMurrough, to help him recover his kingdom of Leinster. Main article: 1170sThe defense of the Carroccio during the battle of Legnano (1176) by Amos Cassioli (18321891)1170: The Treaty of Sahagn is signed by Alfonso VIII of Castile and Alfonso II with three hostages, to be used as tribute payments owed by Ibn Mardan of Valencia and Murcia.1170: On December 29, Thomas Becket is murdered in Canterbury Cathedral.1171: Saladin deposes the last Fatimid Caliph Al-'id and establishes the Ayyubid dynasty.1171: On November 11, Henry II of England lands in Ireland to assert his claim as Lord of Ireland.1172: The Pandyan city of Madurai is sacked by the Sinhalese army due to an attempt to drive off the rival throne claimant, Kulasekara Pandyan.1173: Sinhalese king Parakramabahu the Great gains a decisive victory by invading the Chola Empire as an ally of the Pandyas in the Battle of Alnwick. He accepts the feudal overlordship of the English crown and pays ceremonial allegiance at York.1175: Hnen Shnin (Genk) founds the Jdo sh (Pure Land) sect of Buddhism.1175: The Treaty of Windsor is signed by King Henry II of England and the High King of Ireland, Ruaidr Ua Conchobair.1176: On May 29, Frederick Barbarossa's forces are defeated in the Battle of Legnano by the Lombard League which results in the emperor's acknowledgment of the pope's sovereignty over the Papal States and Alexander acknowledging the emperor's overlordship of the imperial Church.1176: On September 17, The Battle of Myriocephalum; Turkish: Miryakefalon Sava) is fought between the Byzantine Empire and the Seljuk Turks in Phrygia. It is a serious reversal for the Byzantine forces and will be the final, unsuccessful, effort by the Byzantines to recover the interior of Anatolia from the Seljuk Turks.1177: The Treaty or Peace of Venice is signed by the papacy and its allies, and Frederick I, Holy Roman Emperor. The Norman Kingdom of Sicily also participates in negotiations and the treaty thereby determines the political course of all of Italy for the next several years.1178: Chinese writer Zhou Qufei, a Guangzhou customs officer, writes of an island far west in the Indian Ocean (possibly Madagascar), from where people with skin "as black as lacquer" and with frizzy hair were captured and purchased as slaves by Arab merchants.1179: The Treaty of Cazola (Cazorla) is signed by Alfonso II of Aragon and Alfonso VIII of Castile, dividing Andalusia into separate zones of conquest for the two kingdoms, so that the work of the Reconquista would not be stymied by internecine feuding. Main article: 1180s1180: The Portuguese Navy defeats a Muslim fleet off the coast of Capeta Science Scienc Espichel.11801185: the Genpei War in Japan.1181: Parakramabahu the Great conducts a large-scale raid on Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transporting a Sinhalese princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious reformations of Theravada Buddhism in Pagan Burma, after a ship transportence princess to the Khmer Empire is attacked by Burmese naval fleets.1182: Religious Reformations of Religio end of the Polonnaruwa-Pagan War.1182: Revolt of the people of Constantinople against the Latins, whom they massacre, proclaiming Andronicus I Comnenus as co-emperor.1183: On January 25, the final Peace of Venice of 1177.1183: On September 24, Andronicus I Comnenus has his nephew Alexius II Comnenus strangled.1184: On March 24, Queen Tamar, King of Georgia, accedes to the throne as sole ruler after reigning with her father, George III, for six years.1184: Diet of Pentecost organised by Emperor Frederick I in Mainz.1185: The Uprising of Asen and Peter against the Byzantine Empire leads to the restoration of the Bulgarian Empire.1185: The cathedral school (Katedralskolan) in Lund, Sweden, is founded. The school is the oldest in northern Europe and one of the oldest in all of Europe.1185: Beginning in this year the Kamakura shogunate deprives the emperor of Japan of political power.1186: On January 27, the future Holy Roman Emperor Henry VI marries Constance of Sicily, the Swedish royal and commercial center Sigtuna is attacked by raiders from Karelia, Couronia, and/or Estonia.[3]1188: The Riah were introduced into the Habt and south of Tetouan by the Almohad caliph, Abu Yusuf Yaqub al-Mansur, and Jochem and Acem were introduced in Tamesna.[4]1189: On September 3, Richard I is crowned King of England at Westminster.1189: On November 11, William II of Sicily dies and is succeeded by his illegitimate cousin Tancred, Count of Lecce instead of Constance.11891192: The Third Crusade is an attempt by European leaders to wrest the Holy Land from Saladin.Main articles: 1190s and 1200sRichard I of England, or Richard the Lionheart.1190: On June 10 Emperor Frederick Barbarossa drowns in the River Salef, leaving the Crusader army under the command of the rivals Philip II of France and Richard I of England, which ultimately leads to the dissolution of the army.1191: Holy Roman Emperor Henry VI attacked the Kingdom of Sicily from May to August but fails and withdrawn, with Empress Constance captured (released 1192).1191: On September 7, Saladin is defeated by Richard I of England at the Battle of Arsuf.1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In the Battle of Arsuf.1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In the Battle of Jaffa, King Richard the Lionheart defeats Saladin.1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In the Battle of Arsuf.1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In the Battle of Arsuf.1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Christian Queen of the Kingdom of Jerusalem1192: In April, Isabella I begins her reign as Chris Richard Lionheart. Under the terms of the agreement, Jerusalem will remain under Muslim control. However, the city will be open to Christian pilgrims. The Latin Kingdom is reduced to a coastal strip that extends from Tyre to Jaffa.1192: Minamoto no Yoritomo is appointed Sei-i Taishgun, "barbarian-subduing great general", shgun for short, the first military dictator to bear this title.1192: Sultan Shahbuddin Muhammad Ghori establishes the first Muslim empire in India for 14 years (11921206) by defeating Prithviraj Chauhan.1193: Nalanda, the great Indian Buddhist educational centre, is destroyed.1194: Emperor Henry VI conquers the Kingdom of Sicily.1195: On June 16, the struggle of Shamqori. Georgian forces annihilate the army of Abu Baqar.1198: The brethren of the Crusader hospital in Acre are raised to a military order of knights, the Teutonic Knights of the Knight Bulgarian Church with the Roman Catholic Church.1200: Construction begins on the Grand Village of the Natchez, Mississippi. This ceremonial center for the Natchez, Mississippi. This ceremonial center for the Natchez near Natchez, Early in the century, Zhang Zeduan paints Along the River During the Qingming Festival. It will later end up in the Palace Museum, Beijing. In southeast Asia, there is conflict between the Khmer Empire and the Champa. Angkor Wat is built under the Hindu king Suryavarman II. By the end of the century, the Buddhist Jayavarman VII becomes the ruler. Japan is in its Heian period. The Chj-jinbutsu-giga is made and attributed to Toba Sj. It ends up at the Kzan-ji, Kyoto.In Oceania, the Tui Tonga Empire expands to a much greater area. Europe undergoes the Renaissance of the 12th century. The blast furnace for the smelting of cast iron is imported from China, appearing around Lapphyttan, Sweden, as early as 1150.Alexander Neckam is the first European to document the mariner's compass, first documented by Shen Kuo during the previous century. Christianity is also introduced to Estonia, Finland, and Karelia. The first medieval universities are founded. Pierre Abelard teaches.Middle English begins to develop, and literacy begins to spread outside the Church throughout Europe.[6] In addition, churchmen are increasingly willing to take on secular matters.[7] The Ars antiqua period in the history of the medieval music of Western Europe begins. The earliest recorded miracle play is performed in Dunstable, England. Gothic architecture and trouvre music begin in France. During the middle of the century, the Cappella Palatina is built in Palermo, Sicily, and the Madrid Skylitzes manuscript illustrates the Synopsis of Histories by John Skylitzes. Fire and plaque insurance first become available in Iceland, and the first documented outbreaks of influenza there happens. The medieval state of Serbia is formed by the Nemanji dynasty. By the end of the century, both the Capetian dynasty and the House of Anjou are relying primarily on mercenaries in their militaries. Paid soldiers are available year-round, unlike knights who expected certain periods off to maintain their manor lifestyles.[8]In India, Hoysala architecture reaches its peak. In the Middle East, the icon will go to the Tretyakov Gallery of Moscow. The Georgian poet Shota Rustaveli composes his epic poem The Knight in the Panther's Skin. Shahab al-Din Suhrawardi founds his "school of illumination". In North Africa, Kente cloth is first woven. In France, the first piedfort coins were minted. The city of Tula burns down, marking the end of the Toltec Empire is established. See also: Timeline of historic inventions 12th century1104: The Venice Arsenal of Venice, Italy, is founded. It employed some 16,000 people for the mass production of sailing ships in large assembly lines, hundreds of years before the Industrial Revolution.1106: Finished building of Gelati.1107: The Chinese engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot with the distance-measuring odometer device.1111: The Chinese Engineer Wu Deren combines the mechanical compass vehicle of the south-pointing chariot we charing the south-pointing charing the south-poin Catholic notion of Purgatory is defined.[9]1185: First record of windmills.Wikimedia Commons has media related to 12th century. ^ Soekmono, R, Drs., Pengantar Sejarah Kebudayaan Indonesia 2, 2nd ed. Penerbit Kanisius, Yogyakarta, 1973, 5th reprint edition in 1988 p.57 ^ Britannica, T. Editors of Encyclopaedia (1998, July 20). Kairi. Encyclopaedia Britannica. ^ Enn Tarvel (2007). Sigtuna hukkumine. Archived 2017-10-11 at the Wayback Machine Haridus, 2007 (7-8), p 3841 ^ Notice sur les Arabes hilaliens. Ismal Hamet. p.248. ^ Francine Weiss and Mark R. Barnes (May 3, 1989). "National Register of Historic Places Registration: Grand Village of the Natchez Site / Fatherland Plantation Site (22-Ad-501)" (pdf). National Park Service. and Accompanying 3 photos, from 1989.(680KB)^ Warren 1961, p.129.^ Warren 1961, p.159.^ Warren 1961, p.129.^ Warren 1961, p.160-61.^ Le Goff, Jacques (1986). The Birth of Purgatory. Chicago: University of Chicago Press. ISBN0226470822.Warren, Wilfred Lewis (1961). King John. University of California Press. p.362. ISBN9780520036437. {{cite book}: ISBN / Date incompatibility (help)Retrieved from " 4The following pages link to 12th century External tools(link countransclusion countsorted list) See help page for transcluding these entriesShowing 50 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500) Antisemitism in Christianity (links | 100 | 250 | 500) Antisemitism in Christianity (links | 100 | 250 | 500) Antisemitism in Christianity (links | 100 | 250 | 500 | 100 | 250 | 500) Antisemitism in Christianity (links | 100 | 250 | 500 | 100 | 250 | 500) Antisemitism in Christianity (links | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 500 | 100 | 250 | 100 | 100 | 250 | 500 | 100 | 250 | 100 | 100 | 250 | 100 | 100 | 250 | 100 | 100 | 250 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | edit)Catharism (links | edit)List of decades, centuries, and millennia (links | edit)Dialect (links | edit)House of Habsburg (links | edit)House of Habsburg (links | edit)Zanzibar (li edit)17th century (links | edit)17th century (links | edit)17th century (links | edit)17th century (links | edit)18th century (li (links | edit)3rd century BC (links | edit)2rd century BC (links | edit)3rd century BC (links | edit)1th century BC (links | edit)1t (links | edit)1299 (links | edit)1299 (links | edit)1299 (links | edit)1160 (links | edit)1160 (links | edit)1141 (links | edit)1135 (links | edit)1135 (links | edit)1135 (links | edit)1294 (links | edit)1135 (links | edit)1135 (links | edit)1294 (links | edit)1294 (links | edit)1299 (links | edit)1135 (links | edit)1294 (links | edit above section. Therefore, instead of answering the question "What is the multiplicative inverse of anything that isn't a simple fractions. Recall that integers are numbers like 1, 16, 2020, or -56. In fact, we can look at them as fractions with a denominator of 1 and numerator equal to the number. In other words, we have 1 = 1/1, 16 = 16/1, 2020 = 2020/1, and -56 = -56/1. Decimals like 0.012 are, in fact, fractions with a denominator should be 10 = 1000 (note that the number of zeros is equal to the exponent). Therefore, we get 0.012 = 12/1000. Remember that sometimes (like in this case), we can write the number as an equivalent fraction with smaller numbers above and below. However, it's not necessary, and the answer will still be valid. Also, if we had, say, 3.012, the result would be a mixed number of 3 and 12/100. We deal with such a case in the next bullet point. These are numbers that have two components: an integer and a fraction (simple or decimal). As an example, consider 2 or 3.2. To convert them into an (improper) fraction, we need to include the whole number times the denominator of the fractional part," to which we add the numerator of the fraction. If we follow these instructions, our two examples give 2 = (2\*4 + 3) / 4 = 11/4 and 3.2 = (3\*10 + 2) / 10 = 32/10 (for the second, recall how we dealt with decimals in the above bullet point). Which ever of the above we're facing, once we have the number written as a simple fraction, we simply apply what we've learned in the above section and obtain the result. Note that the answer might not be in its simplest form, so you might wish to reduce the nominator using tools such as the greatest common factor calculator. That concludes our elaborate answer to the question "What is the multiplicative inverse of a number?" which means that it's time to leave the theory behind and get on with examples. Get to know how you could determine the multiplicative inverse of a number, fraction, or mixed number with the assistance of this free online multiplicative inverse in brief detail Lets move on! What Is The Multiplicative Inverse? A reciprocal number that when multiplicative inverse of 5 is 1/5 and that of 6 is 1/6. You could also find the multiplicative inverse of any number format by subjecting this to this best inverse number calculator. How To Find Multiplicative Inverse of A Number? There are different ways to calculate the multiplicative inverse of a number is another number that nullifies the impact of the number and makes it identity or 1. You can easily determine the Multiplicative inverse is 1/n such that: n\*1/n = 1 The Multiplicative inverse of A Fraction: The multiplicative inverse of the fraction is another fraction that cancels out the impact of the fraction and the result is 1. One fast way to determine the multiplicative inverse of a fraction is by the use of the free inverse of a numbers calculator. Lets move ahead discussing the generic expression: If a/b is a fraction, then its multiplicative inverse is b/a such that: a/b\*b/a=1 The Multiplicative Inverse of A Decimal: Now you could instantly find the multiplicative inverse of a decimal number with this best multiplicative inverse of a decimal is treated in the same way as a fraction. The multiplicative inverse of the decimal fraction of 0.75 is done by converting the number into a fraction as 75/100. The multiplicative inverse of Mixed Fraction: To find the multiplicative inverse of a mixed fraction, first convert it into the improper fractions. Then apply the same procedure as for the fraction. Multiplicative Inverse Chart: Consider a mixed fraction 5(), we get 27/5 and its Multiplicative inverse of mixed fractions too. Here we are having a chart that is packed with the most commonly used multiplicative inverses of numbers, fractions, or mixed numbers. Lets go through it! Number Multiplicative inverse 9 1/9 3 1/3 7 1/7 8 1/8 3 4 4 3 1 2 2 1 4 1/4 2 5 5 2 6 1/6 2/5 5/2 1 9 9 1 1 7 7 1 2 1/2 2/5 11 1/11 10 1/10 1/4 4/1 3 4 4 3 1/7 7/1 7 9 9 7 3/4 4/3 3/5 5/3 2 5 5 2 15 1/15 11 1/11 You can also verify these values by using this online multiplicative inverse calculator. How To Calculate Inverse of A Number? Here we will be solving examples to understand the concept of the multiplicative inverse. Example # 01: How to find inverse of a number 5, we can solve it: 5/11/5=1 Our free multiplicative inverse of a number 5? Solution: To find the multiplicative inverse of the number 5, we can solve it: 5/11/5=1 Our free multiplicative inverse of the number 5? saves you a lot of time. Example # 02: What is the multiplicative inverse of 1 4? Solution: As the given number is a fraction, 1 4, we can solve it: 1/44/1=1 Here 1 4 means How Does The Multiplicative inverse of any number format. Lets find how! Input: From the top drop-down list, select which number type you want to find the multiplicative inverse of given value. After you do that, enter the required numbers in their designated fields Now tap the calculate button or mixed number Detailed calculations involved FAQs: What is the multiplicative inverse of -17 is 1/-17. What is the multiplicative inverse of -2/5 is -5/2. What is the multiplicative inverse of -17 is 1/-17. main reason for that is 0xN=0 and N/0 is undefined. You can say the multiplicative inverse of a matrix is another matrix that produces a resultant matrix, an identity matrix. Conclusion: The multiplicative inverse is important when solving the variable in the equation and formulas. This property is going to be used to cancel out the effect of the variable. This is why our best multiplicative inverse of any number form accurately. References: From the source of Wikipedia: Multiplicative inverse, Complex numbers, Calculus, Algorithms From the source of khan academy: Inverse, including the definition and how to find it. Students will first learn about the multiplicative inverse in 6 th grade math as part of their work in number and operations with fractions when they learn how to divide fractions and extend their knowledge as they work through number systems in middle school. The multiplicative inverse property states that a number that is multiplicative inverse of a number and its reciprocal. will always have a product of 1. Lets take the number 5. 5 has a reciprocal of \cfrac{1}{5} \, . Multiply 5 and \cfrac{1}{5} =1 \cfrac{1}{5} =1 \cfrac{1}{5} \, . To help make sense of a multiplicative inverse, lets look at visual models. Do you see a pattern? 2 \rightarrow \cfrac{1}{2} 3 \rightarrow \cfrac{1}{3} Not yet? Do you see a pattern now? \cfrac{2}{1} \rightarrow \cfrac{3}{1} \rightarrow \cfrac{1}{3} Can negative numbers have multiplicative inverses? Lets look at -2. If you follow the pattern, the reciprocal of -2 is \cfrac{1}{2}=\cfrac{1}{2} (the placement of the negative sign can be in the denominator, numerator, or out in front). -2 \times \cfrac{1}{-2} = \cfrac{2}{-2} = \cfrac{2}{

fractions, example, by using visual fraction models and equations to represent the problem. Grade 7: Number System (7.NS.A.2a)Understand that multiplication is extended from fractions to retional numbers by requiring that operations. (1)(1)=1 and the rules for multiplying signed numbers. Interpret products of rational numbers. Interpret products of rational number. If p and q are integers, then \left(\cfrac{p}{q}\right) = \cfrac{p}{q} = \cfrac{p}{q} = \cfrac{p}{q} \, Interpret quotients of rational numbers by describing real-world contexts. Use this quiz to check your grade 4 to 6 students understanding of fraction operations. 10+ questions with answers covering a range of 4th to 6th grade fraction operations topics to identify areas of strength and support! DOWNLOAD FREE x Use this quiz to check your grade 4 to 6 students understanding of fraction operations. 10+ questions with answers covering a range of 4th to 6th grade fraction operations. 10+ questions with answers covering a range of a number. If the number is a whole number, mixed number, decimal, or integer, write it as an improper fraction. Flip the fraction by switching the number is a whole number, mixed number, mixe fraction by switching the numerator and denominator.  $cfrac{10}{1} = 0$  frac $10{1} = 0$  frac\cfrac{4}{7}. If the number is a whole number, mixed number, decimal, or integer, write it as an improper fraction. \cfrac{4}{7} \, is a proper fraction. Flip the fraction by switching the numerator and denominator. \cfrac{4}{7} \, is a proper fraction. Flip the fraction by switching the numerator and denominator. \bf{1}.\cfrac{4}{7} \times \cfrac{7}{4}=\cfrac{2}{3}. If the number, mixed number, decimal, or integer, write it as an improper fraction. 1 \cfrac{2}{3}. If the number is a whole number, mixed number, mixed number, decimal, or integer, write it as an improper fraction. 1 \cfrac{2}{3}. If the number is a whole number, mixed the numerator and denominator.  $cfrac{3}{5} = cfrac{3}{5} = cfrac{5}{3} = cfrac{5}{3} = cfrac{5}{5} = cfrac{5}{5}$ the number is a whole number, mixed number, decimal, or integer, write it as an improper fraction. 0.13 is thirteen hundredths, which is \cfrac{10}{10} \rightarrow \cfrac{10}{13} 13 becomes the denominator, and 100 becomes the numerator. Check to make sure the product is  $bf{1}$ .  $cfrac{13}{100}$  inverse of 0.13 $left(cfrac{13}{100})$ . Find the multiplicative inverse of 0.13 $left(cfrac{13}{100})$ . Find the multiplicative inverse of 0.13 $left(cfrac{13}{100})$ . numerator and denominator.  $cfrac{1}{1} \cdot cfrac{1}{1} \cdot c$ number, mixed number, decimal, or integer, write it as an improper fraction. -1 \cfrac{2}{9}=\cfrac{-11}{9} Flip the fraction by switching the numerator. The placement of the negative number can be out in front of the fraction, -\cfrac{9}{11} Check to make sure the product is  $bf{1}$ .  $cfrac{9}{-11}=cf$ numbers on their own by strategically asking questions such as, what number multiplied to 5 will give a product of 1? When worksheets serve a purpose in the classroom and can help with skill practice and test prep practice, having students discover the mathematical concepts is more meaningful for building long lasting understanding. Provide students with calculations, but rather develop an understanding of the topic. Trying to find the reciprocal of zeroZero does not have a reciprocal. This is because we can think about 0 as being \cfrac{0}{1}. When the numerator and the denominator are flipped it becomes \cfrac{1}{0} or 1 \div 0 which is undefined (it does not exist). For getting that a whole number can be written as an improper fractionWhole number can be written as an improper fractionWhole number can be written as \cfrac{1}{0} or 1 \div 0 which is undefined (it does not exist).  $\{1\}$ . Write 33 as an improper fraction, 33=\cfrac{33}{1} Flip the numerator and the denominator. 33 becomes the denominator. Flip the numerator and 1 becomes the numerator. Check that the product of the numerator. Flip the numerator. Flip the numerator. Flip the numerator and 1 becomes the denominator. The numerator and 1 becomes the numerator. Flip the numerator. Flip the numerator. Flip the numerator and 1 becomes the numerator. Flip the numerator. Flip the numerator. Flip the numerator and 1 becomes the numerator. Flip the numerator. F numerator and the denominator. 10 becomes the denominator and 13 becomes the numerator. Check that the product of the number and its multiplicative inverse of \cfrac{13}{10} = 1 The multiplicative inverse of -11 when multiplied to -11 when multiplied to -11 when multiplicative inverse of \cfrac{13}{10} = 1 The multiplicative inverse of -11 when multiplicative inverse of \cfrac{13}{10} = 0 Correc{13}{10} = 0 C will make the product equal to 1. Make -11 into a fraction,  $cfrac{-11}{1} \$ , . Flip the numerator and the denominator. -11 becomes the denominator. -11 becomes the denominator and 1 becomes the denominator. -11 becom an improper fraction,  $cfrac{-24}{7}$  Flip the numerator. The multiplicative inverse is  $cfrac{-168}{-168}=cfrac{-168}{-168}=1$  Change 0.27 to a fraction,  $cfrac{27}{100}$ . Flip the numerator and 7 becomes the denominator. -24 becomes the numerator. The multiplicative inverse is  $cfrac{-168}{-168}=$ and the denominator. 27 becomes the numerator,  $cfrac{100}{27}$ ,  $cfrac{100}{27}$ . Change -5.1 to an improper fraction. -5.1=-5  $cfrac{1}{10}$  + lip the multiplicative inverse of 0.27  $left(cfrac{27}{100})$  is  $cfrac{100}{27}$ . numerator and the denominator. -51 becomes the denominator and 10 becomes the numerator. The multiplicative inverse of -5.1\left(\cfrac{-51}{10}\...\cfrac{-51}{10}}=\cfrac{510}{510}=1 Is there a multiplicative inverse of any real number or complex number? Rational numbers (natural numbers, whole numbers, integers, fractions/decimals) and irrational number a is \cfrac{1}{a} \, . For example, the multiplicative inverse of 5 can be written as 1 \div 5 or \cfrac{1}{5} \, . 5 \times \cfrac{1}{5}=1 \, . \Pi is an irrational number. The multiplicative inverse of \Pi is 1 \div \Pi or \cfrac{1}{\Pi}=1. To find the multiplicative inverse of 0 is 1 \div 0 or \cfrac{1}{\Pi}=1. To find the multiplicative inverse of 0 is 1 \div 0 or \cfrac{1}{\Pi}=1. multiplicative inverses. The complex number z has \cfrac{1}{z} \, as its multiplicative inverse. All types of numbers. For example, the multiplicative inverse of 5 (written as \cfrac{5}{1} \, ) is \cfrac{5}{1} \, ) is \cfrac{5}{1} \, ) is \cfrac{5}{1} \, ) is the multiplicative inverse of a number. Is the multiplicative inverse of a number. Is the multiplicative inverse of a number inverse of a number inverse of a number. multiplied by the original number gives a product of 1. So, it is often just flipping the fraction around. What is the additive inverse? The reciprocal of a number? The reciprocal of a number is the multiplicative identity? The multiplicative identity? The multiplicative identity is 1 because a number times 1 has a product of that number. What is the additive inverse? The additive inverse is a number when added to the original number has a sum of 0. For example, the additive inverse of 5 is -5 because 5+(-5)=0. What is an extended euclidean algorithm or extended euclidean algorithm or extended euclidean algorithm? an integer linear combination. This is something explored in an advanced high school or college level. What is modular arithmetic? Modular arithmetic? Modular arithmetic? Modular arithmetic is studied in advanced high school or college level. determine the remainder of a division operator or the modulo operator. Decimals Exponents Algebra 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-on-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 Use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 2 Use our calculator to get the reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number, just divide 1 by that number. Examples: The reciprocal of 7 is one serventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website, neither this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 3 Use our calculator. Reciprocal of a number or of a fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 4 Use our calculator to get the reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a Fraction Calculator. Reciprocal of a number or of a fraction calculator. Reciprocal of a number or of a fraction calculator. when multiplied by n, their product is 1. In other words, the reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divided by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by that number. 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website are not suitable for any use involving risk to health, finances or property. Page 5 Use our calculator to get the reciprocal of 10/18. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a Fraction Calculator. Reciprocal of a Number or of a Fraction Calculator. reciprocal of any number is one divided by that number. The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 6 Use our calculator to get the reciprocal of 1 10/18. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 7 Use our calculator to get the reciprocal of 1 16/18. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 8 Use our calculator to get the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a number or of a fraction as well as use our step-by-step calculator. reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website are not suitable for any use involving risk to health, finances or property. Page 9 Use our calculator to get the reciprocal of a number or of a fraction calculator. Reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a fraction calculator. minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of a real number. Examples: The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number. The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333... or 3. While every effort is made to ensure the accuracy of the information provided on this website nor its authors are responsible for any use involving risk to health, finances or property. Page 10 Use our calculator to get the reciprocal of 1/18. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a fraction as well as use our step-by-step calculator. product is 1. In other words, the reciprocal of a real number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 7 effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any use involving risk to health, finances or property. Page 11 Use our calculator to get the reciprocal of 2/11. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a number is one), is a number or of a Fraction Calculator. Reciprocal of any number is one divided by that number. The reciprocal of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 12 Use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 13 Use our calculator to get the reciprocal of 8/18. Also, learn what is the reciprocal of a number or of a fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 14 Use our calculator to get the reciprocal of a Number or of a fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. 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While every effort is made to ensure the accuracy of the information provided on this website, neither t learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a Fraction Calculator. number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 17 Use our calculator to get the reciprocal of 2 6/13. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal of a number n, denoted by 1n or n1 (n to the power of minus one), is a number n, denoted by 1n or n1 (n to the power of minus one). fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 18 Use our calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a rea number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 19 Use our calculator to get the reciprocal of a number or of a fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of any number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 20 Use our calculator to get the reciprocal of a number or of a fraction calculator. Reciprocal of a Number or of a Fraction Calculator. Reciprocal of a number or of a fraction as well as use our step-by-step calculator. minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 21 Use our calculator to get the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a number n, denoted by 1n or n1 (n to the power of minus one), is a number or of a fraction as well as use our step-by-step calculator. product is 1. In other words, the reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any use involving risk to health, finances or property. Page 22 Use our calculator to get the reciprocal of 2 6/8. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-by-step calculator. Reciprocal of a number or of a Fraction Calculator. Reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 0.333... is 1 divided by 0.333... or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 23 Use our calculator to get the reciprocal of 2 7/13. Also, learn what is the reciprocal of a number or of a fraction as well as use our step-bystep calculator. Reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divide 1 by that number. Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 24 Use our calculator to get the reciprocal of a number or of a fraction as well as use our step-by-step calculator. 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Examples: The reciprocal of 7 is one senventh = 1/7 = 0,142857142857...) The reciprocal of 0.333... is 1 divided by 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Page 26 Use our calculator to get the reciprocal of a Number or of a Fraction Calculator A multiplicative inverse or reciprocal for a number n, denoted by 1n or n1 (n to the power of minus one), is a number which when multiplied by n, their product is 1. In other words, the reciprocal of any number is one divided by that number. The reciprocal of a fraction xy is yx. To find the multiplicative inverse of a real number, just divided by that number. The reciprocal of 0.333... is 1 divided by that number. 0.333..., or 3. While every effort is made to ensure the accuracy of the information provided on this website, neither this website nor its authors are responsible for any errors or omissions. Therefore, the contents of this site are not suitable for any use involving risk to health, finances or property. Number which when multiplied by x equals 1This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. Find sources: "Multiplicative inverse" news newspapers books scholar JSTOR (July 2025) (Learn how and when to remove this message) "Reciprocal (mathematics)" redirects here; not to be confused with Reciprocation (geometry). The reciprocal function: y = 1/x. For every x except 0, y represents its multiplicative inverse or reciprocal for a number x, denoted by 1/x or x1, is a number which when multiplied by x yields the multiplicative identity, 1. The multiplicative inverse of a fraction a/b is b/a. For the multiplicative inverse of a real number, divide 1 by the number. For example, the reciprocal of 0.25 is 1 divided by 0.25, or 4. The reciprocal function, the function f(x) that maps x to 1/x, is one of the simplest examples of a function which is its own inverse (an involution). Multiplying by a number is the same result as division by 5/4 (or 1.25). Therefore, multiplication by 4/5 (or 0.8) will give the same result as division by 5/4 (or 1.25). its reciprocal is 1). The term reciprocal was in common use at least as far back as the third edition of Encyclopdia Britannica (1797) to describe two numbers whose product is 1; geometrical quantities in inverse proportion are described as reciprocall in a 1570 translation of Euclid's Elements.[1]In the phrase multiplicative inverse, the qualifier multiplicative is often omitted and then tacitly understood (in contrast to the additive inverse). Multiplicative inverses can be defined over many mathematical domains as well as numbers. In these cases it can happen that ab ba; then "inverse" typically implies that an element is both a left and right inverse. The notation f 1 is sometimes also used for the inverse function of the function f, which is for most functions not equal to the multiplicative inverse. For example, the multiplicative inverse is not sufficient to make this distinction, since many difference reciprocal versus inverse is not sufficient to make this distinction, since many difference reciprocal versus inverse is not sufficient to make this distinction. authors prefer the opposite naming convention, probably for historical reasons (for example in French, the inverse function is preferably called the bijection rciproque). In the real numbers, zero does not have a reciprocal (division by zero is undefined) because no real number multiplied by 0 produces 1 (the product of any number with zero is zero). With the exception of zero, reciprocals of every real number are real, reciprocals of every rational number are rational, and reciprocals of every that every element other than zero has a multiplicative inverse is part of the definition of a field, of which these are all examples. On the other hand, no integer other than 1 and 1 has an integer reciprocal, and so the integers are not a field. In modular arithmetic, the modular multiplicative inverse of 3 modulo 11 is 4 because 4 3 1 (mod 11). The extended Euclidean algorithm may be used to compute it. The sedenions are an algebra in which every nonzero element has a multiplicative inverse, but which nonetheless has divisors of zero, that is, nonzero elements x, y such that xy = 0. A square matrix has an inverse if and only if its determinant has an inverse in the coefficient ring. The linear map that has the matrix A1 with respect to some base is then the inverse function of the map having A as matrix in the same base. Thus, the two distinct notions of the inverse of a function are strongly related in this case, but they still do not coincide, since the multiplicative inverse of Ax would be (Ax)1, not A1x. These two notions of an inverse function do sometimes coincide, for example for the function  $f(x) = x i = e i \ln (x) \{ displaystyle f(x) = x^{i} = e^{i} (x) \}$  where  $\ln \{ displaystyle e^{i} \}$  where  $\ln \{ displaystyle e^{i} \}$ (2 + 5) is the irrational 2 + 5 (\displaystyle 2+{\sqrt {5}}) is 2 + 5 (\displaystyle 2+{\sqr integer. The reciprocal function plays an important role in simple continued fractions, which have a number of remarkable properties relating to the representation of (both rational and) irrational numbers. If the multiplicative, an element x with a multiplicative inverse cannot be a zero divisor (x is a zero divisor if some nonzero y, xy = 0) To see this, it is sufficient to multiply the equation xy = 0 by the inverse of x (on the left), and then simplify using associativity. In the absence of associativity, the sedenions provide a counterexample. The converse does not hold: an element which is not a zero divisor is not guaranteed to have a multiplicative inverse. Within Z, all integers except 1, 0, 1 provide examples; they are not zero divisors nor do they have inverses in Z.If the ring or algebra is finite, however, then all elements a which are not zero divisors do have a (left and right) inverse. For, first observe that the map f(x) = ax must be injective: f(x) = f(y) implies x = y: a x = a y a x a y = 0 a (x y) = 0 x y = 0 x = y. {\displaystyle} {\begin{aligned}ax&=ay&\quad \Rightarrow &\quad ax-ay=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y=0\\&&\quad x-y)=0\\&&\quad x-y)=0\\&&\quad x-y=0\\&&\quad x-y=0\\&\quad x-(namely multiplication by a) must map some element x to 1, ax = 1, so that x is an inverse for a. The expansion of the reciprocal 1/q in any base can also act[3] as a source of pseudo-random numbers, if q is a "suitable" safe prime, a prime of the form 2p+1 where p is also a prime. A sequence of pseudo-random numbers of length q1 will be produced by the expansion. Division (mathematics) Exponential decay Fraction Group (mathematics) Hyperbola Inverse distribution List of sums of reciprocals Repeating decimal 6-sphere coordinates Unit fractions reciprocals and poles "In equal Parallelipipedons the bases are reciprokall to their altitudes". OED "Reciprocal" 3a. Sir Henry Billingsley translation of Elements XI, 34.^ Anthony, Dr. "Proof that INT(1/x)dx = lnx". Ask Dr. Math. Drexel University. Retrieved 22 March 2013.^ Mitchell, Douglas W., "A nonlinear random number generator with known, long cycle length", Cryptologia 17, January 1993, 5562. Maximally Periodic Reciprocals, Matthews R.A.J. Bulletin of the Institute of Mathematics and its Applications vol 28 pp 147148 1992Retrieved from " concept of multiplicative inverse plays a key role in mathematics and is widely applicable to both real-life situations, error checking in calculations, and many algebra problems much easier for students. What Is Multiplicative Inverse? A multiplicative inverse is defined as the number which, when multiplied with the original number, gives a product of 1. In simple words, the multiplicative inverse of any non-zero number x is 1/x. Youll see this idea in fractions, rational numbers, and algebraic expressions. Key Formula for Multiplicative InverseHeres the standard formula: \( \text{Multiplicative Inverse of } x = \frac{1}{x} \) For a fraction \( \frac{b}{a} \), multiplicative inverse is \( \frac{b}{a} \) (as long as neither \( a \) nor \( b \) is zero). Cross-Disciplinary UsageMultiplicative inverse is not only useful in Maths but also plays an important role in Physics (for unit conversions), Computer Science (for algorithms involving division), and daily logical reasoning. Students preparing for JEE, Olympiads, or school exams will see its relevance in many word problems and operations. Step-by-Step IllustrationGiven a number, say (x = 5) Multiplicative inverse =  $(\sqrt{rac{1}{5}})$  For a fraction, like  $(\sqrt{rac{3}{4}})$ . Multiplicative inverse =  $(\sqrt{rac{4}{3}})$ \)For a negative integer, like \( -8 \):Multiplicative inverse = \( -\frac{1}{8} \)Final check: Multiply the number by its multiplicative inverse the answer should always be 1. For example, \( 5 \times \frac{3}{4} \times \frac{3}{4} = 1 \), \( \frac{3}{4} = 1 \), \( \frac{1}{5} = 1 \), \( \frac{1} fraction, just flip (swap) the numerator and denominator. For decimals, convert to fraction, then flip.Example Trick: What is the multiplicative inverse of (0.2) becomes (0.2) as a fraction: (0.2) becomes (0.2) be during exams like NTSE, Olympiads, and even entrance tests. Vedantu sessions often teach such easy approaches to help build your calculation speed and confidence. Common Questions and Answers Type Example Multiplicative Inverse Check Integer 4 1/4 4 1/4 = 1 Negative Integer -12 -1/12 -12 -1/12 = 1 Fraction -13/19 -19/13 Product = 1 Zero 0 Not defined 0 anything = 0 Try These YourselfFind the multiplicative inverse of \( \frac{5}{8} \)?Does zero have a multiplicative inverse of \( \frac{5}{8} \)?Does zero have a multiplicative inverse of \( \frac{5}{8} \)?Does zero have a multiplicative inverse of \( \frac{5}{6} means sum is zero; multiplicative inverse means product is one. Trying to find an inverse for zero (it does NOT exist!). Forgetting to flip both the numerator and denominators signs for negative fractions. Not checking the answer by multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse for zero (it does NOT exist!). Forgetting to flip both the numerator and denominators signs for negative fractions. Not checking the answer by multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original inverse = 1. Relation to Other Concepts The idea of multiplying always verify: original invers closely with topics such as reciprocal (they are the same in maths!) and multiplicative identity (why the product must be 1). Its also essential when you divide fractions or solve algebraic equations involving ratios. Classroom TipA quick way to remember the multiplicative inverse is to think: What do I multiply this by to get one? For fractions, just flip. For decimals, change to fraction then flip. Vedantus teachers use hand-tricks, doodles, and lots of practice examples to make this topic super easy in live classes. Summary Table: Multiplicative Inverse Rules Number 7 1/7 Negative Integer 1 over the number -4 -1/4 Fraction Swap numerator & denominator 3/5 5/3 Zero None / undefined 0 No inverse One Self-inverse 1 1 We explored multiplicative inverse from definition, formula, tricks, examples, and connection with other maths ideas. The more you practice, the easier it gets to spot and use inverses everywhere. Keep practicing with Vedantu for complete confidence in all maths operations! Continue Learning: Share copy and redistribute the material in any medium or format 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 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. Inverse means the opposite in effect. The reverse of. It is a general idea in mathematics and has many meanings. Here are a few. The Inverse of Adding is Subtracting Adding moves us one way, subtracting moves us the opposite way. Example:  $15 \ 3 = 12$  can be reversed by 12 + 3 = 15 (back to where we started) Additive Inverse The additive inverse is what we add to a number to get zero. Another example: the additive inverse of +7 is 7. The Inverse of Multiplying is Dividing Multiplying can be "undone" by dividing. Example: 59 = 45 can be reversed by 45 / 9 = 5 It works the other way around too, dividing can be undone by multiplying. Example: 10 / 2 = 5 can be reversed by 52 = 10 Multiplicative Inverse The multiplicative inverse is what we multiply a number by to get 1. It is the reciprocal of a number. Example: 5 0 = 0 cannot be reversed by 0/0 = ??? Doing a function and then its inverse will give us back the original value: When the function f turns the apple into a banana, Then the inverse function f-1 turns the banana back to the apple Here we have the function f(x) = 2x+3, written as a flow diagram: The Inverse of a Function to find out more. Inverse Sine, Cosine and Tangent The sine function sin takes angle and gives the ratio opposite hypotenuse The inverse sine function sin-1 takes the ratio oppositehypotenuse and gives angle A similar idea applies to cosine, tangent to find out more. The Inverse of an Exponent is a Logarithm Read logarithm sto find out more, but basically: The logarithm tells us what the exponent is! Copyright 2024 Rod Pierce

What is the multiplicative inverse of 5 6. What is the multiplicative inverse of 5 8. What is the multiplicative inverse of 5/6. What is the multiplicative inverse of 5/8. What is the multiplicative inverse of 5/8. What is the multiplicative inverse of 5/8. What is the multiplicative inverse of 5/4. What is the multiplicative inverse of 5/2. What is the multiplicativ

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