Chapter 1 : Glossary of wine terms - Wikipedia

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For a balance to be formed, the boundaries of the system must be clearly defined. Mass balances can be taken over physical systems at multiple scales. Mass balances can be simplified with the assumption of steady state , in which the accumulation term is zero. Illustrative example[edit] Diagram showing clarifier example A simple example can illustrate the concept. Consider the situation in which a slurry is flowing into a settling tank to remove the solids in the tank. Solids are collected at the bottom by means of a conveyor belt partially submerged in the tank, and water exits via an overflow outlet. In this example, there are two substances: The water overflow outlet carries an increased concentration of water relative to solids, as compared to the slurry inlet, and the exit of the conveyor belt carries an increased concentration of solids relative to water. The tank is assumed to be operating at steady state, and as such accumulation is zero, so input and output must be equal for both the solids and water. This allows us to completely determine how the mass has been distributed in the system with only limited information and using the mass balance relations across the system boundaries. Mass feedback recycle [edit] Cooling towers are a good example of a recycle system Mass balances can be performed across systems which have cyclic flows. In these systems output streams are fed back into the input of a unit, often for further reprocessing. However, recycle flows are by no means restricted to solid mechanics operations; they are used in liquid and gas flows, as well. One such example is in cooling towers , where water is pumped through a tower many times, with only a small quantity of water drawn off at each pass to prevent solids build up until it has either evaporated or exited with the drawn off water. The use of the recycle aids in increasing overall conversion of input products, which is useful for low per-pass conversion processes such as the Haber process. Differential mass balances[edit] A mass balance can also be taken differentially. The concept is the same as for a large mass balance, but it is performed in the context of a limiting system for example, one can consider the limiting case in time or, more commonly, volume. A differential mass balance is used to generate differential equations that can provide an effective tool for modelling and understanding the target system. The differential mass balance is usually solved in two steps: The following systems are good examples of the applications of the differential mass balance: Isothermal conditions are assumed, and mixing prevents concentration gradients as reactant concentrations decrease and product concentrations increase over time. The mass balance for a substance A becomes I.

In addition the chapter on control of cash has been amplified and the line of balance chapter now includes discussion of the elemental trend analysis technique. The Solutions Manual has been converted into a lecturer's manual whose purpose is to help tutors by reducing the time taken in the drawing of networks.

Three Klans First KKK The first Klan was founded in Pulaski, Tennessee , sometime between December and August by six former officers of the Confederate army [20] as a fraternal social club inspired at least in part by the then largely defunct Sons of Malta. It borrowed parts of the initiation ceremony from that group, with the same purpose: The manual of rituals was printed by Laps D. The members had conjured up a veritable Frankenstein. For example, Confederate veteran John W. Morton founded a chapter in Nashville, Tennessee. In and , the federal government passed the Enforcement Acts , which were intended to prosecute and suppress Klan crimes. It seriously weakened the black political establishment through its use of assassinations and threats of violence; it drove some people out of politics. On the other hand, it caused a sharp backlash, with passage of federal laws that historian Eric Foner says were a success in terms of "restoring order, reinvigorating the morale of Southern Republicans, and enabling blacks to exercise their rights as citizens". Rable argues that the Klan was a political failure and therefore was discarded by the Democratic leaders of the South. More fundamentally, it declined because it failed to achieve its central objective â€" the overthrow of Republican state governments in the South. They were described as acting as the military arm of the Democratic Party and are attributed with helping white Democrats regain control of state legislatures throughout the South. Second KKK See also: While Simmons relied on documents from the original Klan and memories of some surviving elders, the revived Klan was based significantly on the wildly popular film, The Birth of a Nation. The earlier Klan had not worn the white costumes or burned crosses; these were aspects introduced in the film. When the film was shown in Atlanta in December of that year, Simmons and his new klansmen paraded to the theater in robes and pointed hoods â€" many on robed horses â€" just like in the movie. These mass parades would become another hallmark of the new Klan that had not existed in the original Reconstruction-era organization. The national headquarters made its profit through a monopoly of costume sales, while the organizers were paid through initiation fees. It grew rapidly nationwide at a time of prosperity. Reflecting the social tensions pitting urban versus rural America, it spread to every state and was prominent in many cities. The second KKK preached "One Hundred Percent Americanism" and demanded the purification of politics, calling for strict morality and better enforcement of Prohibition. Its official rhetoric focused on the threat of the Catholic Church , using anti-Catholicism and nativism. During the resurgence of the second Klan during the s, its publicity was handled by the Southern Publicity Association â€"within the first six months of the Associations national recruitment campaign, Klan membership had increased by 85, Internal divisions, criminal behavior by leaders, and external opposition brought about a collapse in membership, which had dropped to about 30, by It finally faded away in the s. As of , researchers estimate that there are just over 30 active Klan groups exist in the United States, [39] with about chapters. Tuscaloosa, Alabama , Independent Monitor, September 1, Hubbs, Searching for Freedom after the Civil War: Klansman, Carpetbagger, Scalawag, and Freedman In , Mississippi Governor William L. Sharkey reported that disorder, lack of control, and lawlessness were widespread; in some states armed bands of Confederate soldiers roamed at will. The Klan used public violence against black people and their allies as intimidation. They burned houses and attacked and killed black people , leaving their bodies on the roads. Local chapters and bands were highly independent. There were never hierarchical levels or state headquarters. Klan members used violence to settle old personal feuds and local grudges, as they worked to restore general white dominance in the disrupted postwar society. The historian Elaine Frantz Parsons describes the membership: Lifting the Klan mask revealed a chaotic multitude of antiblack vigilante groups, disgruntled poor white farmers, wartime guerrilla bands, displaced Democratic politicians, illegal whiskey distillers, coercive moral reformers, sadists, rapists, white workmen fearful of black competition, employers trying to enforce labor discipline, common thieves, neighbors with decades-old grudges, and even a few freedmen and white Republicans who allied with

Democratic whites or had criminal agendas of their own. Indeed, all they had in common, besides being overwhelmingly white, southern, and Democratic , was that they called themselves, or were called, Klansmen. Its purposes were political, but political in the broadest sense, for it sought to affect power relations, both public and private, throughout Southern society. It aimed to reverse the interlocking changes sweeping over the South during Reconstruction: Those political leaders assassinated during the campaign included Arkansas Congressman James M. Hinds , three members of the South Carolina legislature, and several men who served in constitutional conventions". Why the Ku Klux Klan members adopted masks and robes that hid their identities and added to the drama of their night rides, their chosen time for attacks. Few freedmen took such nonsense seriously. When they killed black political leaders, they also took heads of families, along with the leaders of churches and community groups, because these people had many roles in society. They drove successful black farmers off their land. Ashburn was assassinated for his pro-black sentiments. Klan violence worked to suppress black voting, and campaign seasons were deadly. More than 2, people were killed, wounded, or otherwise injured in Louisiana within a few weeks prior to the Presidential election of November Landry Parish had a registered Republican majority of 1,, after the murders, no Republicans voted in the fall elections. The KKK killed and wounded more than black Republicans, hunting and chasing them through the woods. Thirteen captives were taken from jail and shot; a half-buried pile of 25 bodies was found in the woods. The KKK made people vote Democratic and gave them certificates of the fact. By the November presidential election , Klan intimidation led to suppression of the Republican vote and only one person voted for Ulysses S. In Mississippi , according to the Congressional inquiry: Each man wore a long white robe and his face was covered by a loose mask with scarlet stripes. She was ordered to get up and dress which she did at once and then admitted to her room the captain and lieutenant who in addition to the usual disguise had long horns on their heads and a sort of device in front. The lieutenant had a pistol in his hand and he and the captain sat down while eight or ten men stood inside the door and the porch was full. They treated her "gentlemanly and quietly" but complained of the heavy school-tax, said she must stop teaching and go away and warned her that they never gave a second notice. She heeded the warning and left the county. Many influential Southern Democrats feared that Klan lawlessness provided an excuse for the federal government to retain its power over the South, and they began to turn against it. Hill stating "that some of these outrages were actually perpetrated by the political friends of the parties slain. They put an end to violence by threatening Klansmen with reprisals unless they stopped whipping Unionists and burning black churches and schools. Armed blacks formed their own defense in Bennettsville, South Carolina and patrolled the streets to protect their homes. This added to the enmity that Southern white Democrats bore toward him. The Governor of South Carolina appealed for federal troops to assist his efforts in keeping control of the state. A riot and massacre occurred in a Meridian, Mississippi courthouse, from which a black state representative escaped by fleeing to the woods. The Ku Klux Klan Act and the Enforcement Act of were used by the federal government to enforce the civil rights provisions for individuals under the constitution. The Klan refused to voluntarily dissolve after the Klan Act, so President Grant issued a suspension of habeas corpus and stationed federal troops in nine South Carolina counties. The Klansmen were apprehended and prosecuted in federal court. End of the first Klan Klan leader Nathan Bedford Forrest boasted that the Klan was a nationwide organization of , men and that he could muster 40, Klansmen within five days notice. However, the Klan had no membership rosters, no chapters, and no local officers, so it was difficult for observers to judge its membership. In , a federal grand jury determined that the Klan was a " terrorist organization" [82] and issued hundreds of indictments for crimes of violence and terrorism. Klan members were prosecuted, and many fled from areas that were under federal government jurisdiction, particularly in South Carolina. Forrest called for the Klan to disband in , arguing that it was "being perverted from its original honorable and patriotic purposes, becoming injurious instead of subservient to the public peace". William Holden of North Carolina. In many states, officials were reluctant to use black militia against the Klan out of fear that racial tensions would be raised. This and extensive violence and fraud at the polls caused the Republicans to lose their majority in the state legislature. Attorney General Amos Tappan Ackerman led the prosecutions. So ended the Reconstruction career of the Ku Klux Klan. In , the Supreme Court ruled in United States v. Harris that the Klan Act was partially unconstitutional. It

recommended that persons who had been victimized should seek relief in state courts, which were entirely unsympathetic to such appeals. The Klan was broken as an organization by The new organization and chapters adopted regalia featured in The Birth of a Nation; membership was kept secret by wearing masks in public. It has been widely noted for inspiring the revival of the Ku Klux Klan. The film was based on the book and play The Clansman: A publicist claimed that Wilson said, "It is like writing history with lightning, and my only regret is that it is all so terribly true. The White House issued a denial of the "lightning" quote, saying that he was entirely unaware of the nature of the film and at no time had expressed his approbation of it. Patrick , from the shores of America. Among the "snakes" are various supposed negative attributes of the Church, including superstition, the union of church and state, control of public schools, and intolerance. The Second Klan saw threats from every direction. According to historian Brian R. Farmer, "two-thirds of the national Klan lecturers were Protestant ministers". Simmons joined 12 different fraternal organizations and recruited for the Klan with his chest covered with fraternal badges, consciously modeling the Klan after fraternal organizations. The organizer kept half the money and sent the rest to state or national officials. When the organizer was done with an area, he organized a rally, often with burning crosses, and perhaps presented a Bible to a local Protestant preacher. He left town with the money collected.

Chapter 3 : Ku Klux Klan - Wikipedia

@prefix schema. @prefix umbel. @prefix genont. @prefix void. @prefix library. @prefix rdf. @prefix bgn. @prefix xsd. @prefix dcterms. @prefix wdrs.

There are commonly asked questions at the end of this article. This routine generates a Microsoft Office Exel spreadsheet. You can use this spreadsheet to match transactions in Payables Management or Receivables Management that were posted to General Ledger. This process does not generate correcting transactions. However, this process can help you determine the transaction differences that are listed in this section. Below is a running list of issues that we have seen that may cause differences: Not all GL batches are posted. The Historical Aged Trial Balance report is printed with restrictions. Print the Historical Aged Trial Balance report again with only a date restriction. Not all accounts payable accounts or all accounts receivable accounts are viewed in General Ledger. Make sure that you view all accounts payable accounts or all accounts receivables accounts in General Ledger. The batch in General Ledger was changed or edited before it was posted. Adjustments to the accounts payable account or to the accounts receivable account may have been entered directly in General Ledger. These transactions update the account in General Ledger. However, these transactions do not update the Historical Aged Trial Balance report. Transactions were posted in Payables Management or in Receivables Management. However, these transactions were not posted to General Ledger if they were for beginning balances. If the Post To General Ledger check box is not selected in the Posting Setup window for the Purchasing series or for the Sales series, the transactions will be posted to Payables Management or to Receivables Management. However, these transactions will not be posted to General Ledger. Then, the net amount of the invoice will be posted to General Ledger. Additionally, the remaining amount is posted to a discounts available account. Documents were voided in a different period than they were originally posted. The voided transaction will appear on the report. If a Historical Aged Trial Balance is printed by using the same date range, the voided document will not print on the report because it has been voided. If you want to balance the accounts payable account balance or the accounts receivables account balance in General Ledger to the Historical Aged Trial Balance report for a certain period, the balances from the Historical Aged Trial Balance report must be reconciled to the net change on the Detailed Trial Balance in General Ledger for the same period. If you want to balance the accounts payable account balance or the accounts receivables account balance in General Ledger to the Historical Aged Trial Balance report for a day that is not in a certain period, determine whether Payables Management or Receivables Management has ever been balanced. If Payables Management or Receivables Management has never been balanced, the beginning balances may be incorrect. In this situation, balance the most current period first, and then reconcile the previous months in reverse order. If posting interruptions have occurred, batches may not have been posted correctly to General Ledger, to Payables Management, or to Receivables Management. When you print the Historical Aged Trial Balance report, you did not click to select the following check boxes in the Exclude area: Click to select these check boxes, and then print the Historical Aged Trial Balance report. This may cause an imbalance on the reconcile for Payables Management to General Ledger because only the net change will post to the General Ledger module. But they should still match in later versions and move to the Matched Transactions section correctly. Since the Work and Open tables share a distribution table, deleting the batch in GP will also remove the distribution records with it. The end result is that the transaction header record exists, but there are no matching distributions on the RM or PM side, but GL was updated correctly. This issue will be considered in the next version of Microsoft Dynamics GP. Distributions may show up in the Potentially Matched section with different amounts if there were discounts. Close the spreadsheet and re-run it with the discount GL accounts listed as well. On the reconcile spreadsheet, the account is only used for the GL side. This was an issue in prior versions for credit card payments using CASH type and hitting the AP account, but these records are dispalying in GP so no longer appears to be an issue. Check the apply date and GL post date in the apply table for multicurrency transactions compared to the actual date it was posted in GL. For example, on Jan 22, a credit memo dated Dec 31 was applied to an invoice dated Dec 5, and the apply date and GL post

date were left as Jan However, when posting the GL batch, the user changed the date to Dec It was not necessarily meant to tie out to the HATB and that was not the intended purpose, although we know clients are doing it. If these match, then you would not necessarily need to run the Reconcile to GL tool for that month. The GL tables are made up of debits and credits, and the tables that the HATB pulls from are transaction header and apply record tables. So customers asked for a way to reconcile the distributions in GL to the distribution tables in RM or PM to help find differences at that level. So this is the reason why the Reconcile to GL routine was created. Whereas the HATB looks at entirely different tables to calculate a balance using the transaction and apply records tables and is a much more complex calculation. We suggest to ignore the totals on the reconcile to GL spreadsheet, and just use the Unmatched and Potentially Matched sections to help you find differences to research to see if that may also explain a difference between the GL TB and HATB. The reasons we have identified are listed at the top of this KB and there could be more reasons not yet identified. But since this reconcile is not necessary between the simple total balance listed on the reconcile to GL spreadsheet and the more complex calculated balance on the HATB report, and not the intended purpose of this reconcile utility, it would be considered a consulting expense to dig into your data to assist you to reconcile these to each other. What should I do if distributions are missing on the GL side? Check to make sure that all GL batches are posted. If they are truly missing on the GL side, you will need to key an adjusting journal entry directly into GL for the entry to create the GL distributions. Also research to see if the transaction itself is listed on the HATB report and is already accounted for. It is possible that the transaction exists, but the distributions are just missing. So is it really necessary to get them added back into RM or PM? But if you so choose to fix the PM distribution table, you would have to void the document, so the applied records move back to open. Then use the Remove Transaction History Utility to remove the voided document. Delete the GL batch created by the void. Then rekey the document back into Payables, so the transactions and distributions are recreated. Be sure to void the GL batch for this. Then reapply the new document to the open documents and they should move to history again. The transactions in the Potentially Matched section look like they match. There are several fields that are matched for each distribution record. All of the fields must match to move it to the Matched section. If some but not all of the fields match, then it will put it in the Potentially Matched Section. For example, here are the fields that are matched for PM to GL: If the transactions are keyed separately, the will have different voucher numbers and Trx Source codes. At best the Posting Date and Amounts may match, which could put them in the Potentially Matched section of the spreadsheet. Why does the Ending Balance on a monthly or quarterly spreadsheet not match the Beginning Balance on the next monthly or quarterly spreadsheet? The Ending Balance is calculated by Excel right in the spreadsheet. The end result could be that some distributions were calculated into the ending balance on the prior spreadsheet, and omitted from the beginning balance on the next period. Review these troubleshooting tips: It is important to locate these in the RM or PM distribution tables and not to rely solely on reprinted posting journals for instance. If you find the distributions in the RM or PM tables, then look at these distributions on the document in the front-end. These are the only types that will be pulled on to the reconcile spreadsheet on the RM or PM side in older versions. So just a display issue with the spreadsheet and not a data issue. However, this does not appear to be an issue in Dynamics GP , as the CASH type is now displayed on the spreadsheet correctly, so was fixed along the way. Can you have the Reconcile to GL window display in other currencies? The Reconcile to GL window as designed to display functional currencies only. See KB for more information.

Chapter 4 : You've run out of balance.

Use Facebook in free mode even without balance on Airtel. Free mode means you won't use data to log in and browse Facebook.

Abstract Background Lack of accounting for proton uptake and secretion has confounded interpretation of the stoichiometry of photosynthetic growth of algae. This is also problematic for achieving growth of microalgae to high cell concentrations which is necessary to improve productivity and the economic feasibility of commercial-scale chemical production systems. Since microalgae are capable of consuming both nitrate and ammonium, this represents an opportunity to balance culture pH based on a nitrogen feeding strategy that does not utilize gas-phase CO_2 buffering. Results The microalgae Chlorella vulgaris and Chlamydomonas reinhardtii exclusively utilize ammonium when both ammonium and nitrate are provided during growth on excess CO_2. However, providing smaller amounts of ammonium sequentially in the presence of nitrate maintained the pH of a Chlorella vulgaris culture for improved growth on 0. Bioreactor pH dynamics are shown to be predictable based on simple nitrogen assimilation as long as there is sufficient CO_2 availability. Conclusions This work provides both a media formulation and a feeding strategy with a focus on nitrogen metabolism and regulation to support high-density algal culture without buffering. The instability in culture pH that is observed in microalgal cultures in the absence of buffers can be overcome through alternating utilization of ammonium and nitrate. Despite the highly regulated array of nitrogen transporters, providing a nitrogen source with a balanced degree of reduction minimizes pH fluctuations. Microalgae, Nitrogen metabolism, pH control, Stoichiometry, High density, Chlorella vulgaris, Chlamydomonas reinhardtii Background Algae-based biofuels have been gaining attention as a potential production platform for renewable fuel and biochemicals. Algal systems offer advantages over terrestrial plant sources, such as higher productivity, increased oils, avoidance of food-for-fuel, and the potential for using both wastewater and saltwater [1 , 2]. However, an improved understanding of nutrient utilization in algal cultures is needed to develop the high density culturing methods that are required to achieve economic feasibility of these systems. Increasing reactor productivity through application of high-density cell concentration reduces downstream harvesting costs. The work in this article aims to achieve this goal by maintaining culture pH through the use of stoichiometrically- balanced growth media. High density algal culture requires the development of media which provides high inorganic salt concentrations while avoiding the accumulation of inhibitory levels of counter-ions [3]. Metabolic flux analysis has been used in an effort to characterize relative rates of consumption in cellular processes, but is only as effective as our limited understanding of algal metabolism [4]. Another approach to formulate growth media is through an examination of the biomass composition [5]. This method is effective for optimization of key inorganic components, but does not address the coupling of nitrogen utilization with the energy balance as reflected in the oxygen and hydrogen components of the biomass. A better understanding of the overall stoichiometry and energetics of growth including water splitting to provide reducing power is required to achieve the goal of ultra-high density algal cultivation. Photosynthetic growth presents a major challenge to stoichiometry that is rarely appreciated â€" even by those who have studied it for space life support systems! Table 1 Algebraic expression of stoichiometric coefficients for common nitrogen sources Nitrogen source.

Chapter 5 : Good use of BATCH statement

A batch is a group of contributions and batch entry is the quickest way to get the contributions into the system. When posting by batch, you can either post the payments using the donor's envelope number or using the donor's last name or Family DUID.

Text[edit] There are several versions of the text of the Second Amendment, each with capitalization or punctuation differences. Differences exist between the drafted and ratified copies, the signed copies on display, and various published transcriptions. The amendment was ratified by the States and authenticated by Secretary of State Thomas Jefferson as: Pre-Constitution background[edit] Influence of the English Bill of Rights of [edit] The right to bear arms in English history is regarded in English law as a subordinate auxiliary right of the primary rights to personal security, personal liberty, and private property. According to Sir William Blackstone , "The Which is â€¦ declared by â€¦ statute, and is indeed a public allowance, under due restrictions, of the natural right of resistance and self-preservation, when the sanctions of society and laws are found insufficient to restrain the violence of oppression. Heller , the Supreme Court did not accept this view, remarking that the English right at the time of the passing of the English Bill of Rights was "clearly an individual right, having nothing whatsoever to do with service in the militia" and that it was a right not to be disarmed by the Crown and was not the granting of a new right to have arms. The statement in the English Bill of Rights concerning the right to bear arms is often quoted only in the passage where it is written as above and not in its full context. In its full context it is clear that the bill was asserting the right of Protestant citizens not to be disarmed by the King without the consent of Parliament and was merely restoring rights to Protestants that the previous King briefly and unlawfully had removed. In its full context it reads: Whereas the late King James the Second by the Assistance of diverse evill Councellors Judges and Ministers imployed by him did endeavour to subvert and extirpate the Protestant Religion and the Lawes and Liberties of this Kingdome list of grievances including That the Subjects which are Protestants may have Arms for their Defence suitable to their Conditions and as allowed by Law. While it did not override earlier restrictions on the ownership of guns for hunting, it is subject to the parliamentary right to implicitly or explicitly repeal earlier enactments. Mark Thompson wrote that, apart from determining the succession, the English Bill of Rights did "little more than set forth certain points of existing laws and simply secured to Englishmen the rights of which they were already posessed [sic]. Which is also declared by the same statute 1 W. Some in the United States have preferred the "rights" argument arguing that the English Bill of Rights had granted a right. The need to have arms for self-defence was not really in question. Peoples all around the world since time immemorial had armed themselves for the protection of themselves and others, and as organized nations began to appear these arrangements had been extended to the protection of the state. Constitution[edit] Ideals that helped to inspire the Second Amendment in part are symbolized by the minutemen. Some of these purposes were explicitly mentioned in early state constitutions; for example, the Pennsylvania Constitution of asserted that, "the people have a right to bear arms for the defence of themselves and the state. As defiance and opposition to British rule developed, a distrust of these Loyalists in the militia became widespread among the colonists, known as Patriots , who favored independence from British rule. As a result, some Patriots created their own militias that excluded the Loyalists and then sought to stock independent armories for their militias. In response to this arms build up, the British Parliament established an embargo of firearms, parts and ammunition against the American colonies. Instances of the licentious and outrageous behavior of the military conservators of the peace still multiply upon us, some of which are of such nature, and have been carried to such lengths, as must serve fully to evince that a late vote of this town, calling upon its inhabitants to provide themselves with arms for their defense, was a measure as prudent as it was legal: It is a natural right which the people have reserved to themselves, confirmed by the Bill of Rights, to keep arms for their own defence; and as Mr. Blackstone observes, it is to be made use of when the sanctions of society and law are found insufficient to restrain the violence of oppression. In opposition, the British forces consisted of a mixture of the standing British Army , Loyalist militia and Hessian mercenaries. Federalists argued that this government had an unworkable division

of power between Congress and the states, which caused military weakness, as the standing army was reduced to as few as 80 men. Subsequently, the Constitutional Convention proposed in to grant Congress exclusive power to raise and support a standing army and navy of unlimited size. McAffee and Michael J. Quinlan have stated that James Madison "did not invent the right to keep and bear arms when he drafted the Second Amendment; the right was pre-existing at both common law and in the early state constitutions. Blackstone in his Commentaries alluded to this right to rebel as the natural right of resistance and self preservation, to be used only as a last resort, exercisable when "the sanctions of society and laws are found insufficient to restrain the violence of oppression". This will not only lessen the call for military establishments, but if circumstances should at any time oblige the Government to form an army of any magnitude, that army can never be formidable to the liberties of the People, while there is a large body of citizens, little, if at all, inferior to them in discipline and the use of arms, who stand ready to defend their own rights, and those of their fellow-citizens. This appears to me the only substitute that can be devised for a standing army, and the best possible security against it, if it should exist. They cite examples, such as the Declaration of Independence describing in "the Right of the People to On May 10, , Congress passed a resolution recommending that any colony with a government that was not inclined toward independence should form one that was.

Batch reactor in terms of enthalpy It is convenient to use enthalpy rather than internal energy in the subsequent development. Taking the differential of the deÂ®nition of enthalpy gives for V V R.

This is because there is no sequence of moves that will swap a single pair of pieces or rotate a single corner or edge cube. Thus there are twelve possible sets of reachable configurations, sometimes called "universes" or "orbits", into which the Cube can be placed by dismantling and reassembling it. However, with marker pens, one could, for example, mark the central squares of an unscrambled Cube with four coloured marks on each edge, each corresponding to the colour of the adjacent face; a cube marked in this way is referred to as a "supercube". Some Cubes have also been produced commercially with markings on all of the squares, such as the Lo Shu magic square or playing card suits. Cubes have also been produced where the nine stickers on a face are used to make a single larger picture, and centre orientation matters on these as well. Thus one can nominally solve a Cube yet have the markings on the centres rotated; it then becomes an additional test to solve the centres as well. In particular, when the Cube is unscrambled apart from the orientations of the central squares, there will always be an even number of centre squares requiring a quarter turn. Thus orientations of centres increases the total number of possible Cube permutations from 43,,,,,, 4. Nominally there are 6! When the orientations of centres are also counted, as above, this increases the total number of possible Cube permutations from 88,,,,,,, 8. This terminology is derived from the mathematical use of algorithm , meaning a list of well-defined instructions for performing a task from a given initial state, through well-defined successive states, to a desired end-state. Many algorithms are designed to transform only a small part of the cube without interfering with other parts that have already been solved so that they can be applied repeatedly to different parts of the cube until the whole is solved. For example, there are well-known algorithms for cycling three corners without changing the rest of the puzzle or flipping the orientation of a pair of edges while leaving the others intact. Some algorithms do have a certain desired effect on the cube for example, swapping two corners but may also have the side-effect of changing other parts of the cube such as permuting some edges. Such algorithms are often simpler than the ones without side-effects and are employed early on in the solution when most of the puzzle has not yet been solved and the side-effects are not important. Most are long and difficult to memorise. Towards the end of the solution, the more specific and usually more complicated algorithms are used instead. For example, one such "level" could involve solving cubes which have been scrambled using only degree turns. These subgroups are the principle underlying the computer cubing methods by Thistlethwaite and Kociemba , which solve the cube by further reducing it to another subgroup. These directions are as one is looking at the specified face. The letters x, y, and z are used to indicate that the entire Cube should be turned about one of its axes, corresponding to R, U, and F turns respectively. When x, y or z are primed, it is an indication that the cube must be rotated in the opposite direction. When they are squared, the cube must be rotated degrees. The most common deviation from Singmaster notation, and in fact the current official standard, is to use "w", for "wide", instead of lowercase letters to represent moves of two layers; thus, a move of Rw is equivalent to one of r. It was used e. Lowercase letters f b u d l r refer to the inner portions of the cube called slices. An alternative notation, Wolstenholme notation, [54] is designed to make memorising sequences of moves easier for novices. This notation uses the same letters for faces except it replaces U with T top , so that all are consonants. Addition of a C implies rotation of the entire cube, so ROC is the clockwise rotation of the cube around its right face. Middle layer moves are denoted by adding an M to corresponding face move, so RIM means a degree turn of the middle layer adjacent to the R face. Singmaster notation was not widely known at the time of publication. Horizontal planes were noted as tables, with table 1 or T1 starting at the top. Vertical front to back planes were noted as book, with book 1 or B1 starting from the left. Vertical left to right planes were noted as windows, with window 1 or W1 starting at the front. Using the front face as a reference view, table moves were left or right, book moves were up or down, and window moves were clockwise or anticlockwise. After sufficient practice, solving the Cube layer by layer can be done in under one minute. Other general solutions include "corners first" methods or combinations of several other

methods. It is similar to the layer-by-layer method but employs the use of a large number of algorithms, especially for orienting and permuting the last layer. The cross is done first, followed by first layer corners and second layer edges simultaneously, with each corner paired up with a second-layer edge piece, thus completing the first two layers F2L. A now well-known method was developed by Lars Petrus. One of the advantages of this method is that it tends to give solutions in fewer moves. For this reason, the method is also popular for fewest move competitions. Next, the corners of the top layer are solved. The cube can then be solved using only moves of the U layer and M slice. The easiest layer by layer methods require only 3â€"8 algorithms. The cross is solved first, followed by the remaining edges, then five corners, and finally the last three corners. The user has to set the colour configuration of the scrambled cube and the program returns the steps required to solve it. There are a number of speedcubing competitions that take place around the world. However, the single best time of all tries is also recorded. The World Cube Association maintains a history of world records. In addition to the main 3x3x3 event, the WCA also holds events where the cube is solved in different ways: Their recorded time for this event includes both the time spent memorizing the cube and the time spent manipulating it. The event is scored not by time but by the number of solved cubes minus the number of unsolved cubes after one hour has elapsed. In fewest moves solving, the contestant is given one hour to find his or her solution and must write it down. The world record average of the middle three of five solve times which excludes the fastest and slowest is 5. The world record fastest one-handed solve is 6. The world record fastest average of five one-handed solves is 9. The world record average of five feet solves is The world record mean of three blindfold solves is Bansal inspected 48 cubes, donned a blindfold, and solved all of them, all under the time limit of one hour. The world record mean of three fewest moves challenges with different scrambles is A YouTube video shows a 0.

Chapter 7 : Rubik's Cube - Wikipedia

For description of the CSD in a batch crystallizer, we can apply the conservation law of numbers of crystals, the concept of population balance. The density function f is a representation of the number of crystals in a given size range and a given volume.

Chapter 8 : BJO Conversations | iPathA Series B Bloomberg Coffe - Yahoo Finance

The table cyclist_expenses stores records about each purchase by a cyclist and includes the running balance of all the cyclist's purchases. Because the balance is static, all purchase records for a cyclist have the same running balance.

Chapter 9 : Second Amendment to the United States Constitution - Wikipedia

MLS designed, executed and analyzed the batch and fed-batch experiments, and developed the ion selective electrode procedure. WRC developed the balanced growth media, conceived the pH control strategy, and designed the trickle-film photobioreactor as well as oversaw experiment design, execution and analysis.