

## Focus for 12th chemistry 3 marks

**What are the most important topics in chemistry class 12?**

**What is the price of focus guide for 12th chemistry rate?** ₹679.00 Current price is: ₹679.00.

**Which is the hardest chapter in chemistry class 12?**

**Which is the hardest class from 1 to 12?** 11th! irrespective of the stream taken , the transition that a student feels when they move to class 11th and the difference they face in difficulty and lengthy syllabus as compared to their sweet time in class 10th that they say each passing day that the previous one was better.

**What is the cost of focus?** It's like hiring extra staff to handle a big project. However, this focus comes at a cost. Our brain consumes more energy and cognitive resources to maintain attention. This is why prolonged concentration can be exhausting.

**What is the average cost of a focus group?** The cost of a focus group depends on several factors, but as a general rule, the average cost of a standard focus group project can range from \$4,000 to \$12,000. As a form of qualitative research, focus groups can be customized to cater to most budgets, therefore it is hard to give one tried and true cost.

**What is the cost of chemistry journal?** The Chemistry journal is indexed in various reputed databases. I) Indian subscribers can buy chemical journal subscription at the following price: Rs 2,500 {Including tax and Postal charges} for one year.

**Which is the most scoring chapter in class 12 chemistry?** Electro Chemistry and Chemical Kinetics are the most important chapters in the Physical Chemistry Unit for CBSE Board class 12. These comprise 16 marks in the final exam. The Important and must to do chapters from the Inorganic Section include Coordination

Compounds and d and f block elements.

**Which is the easiest chapter in chemistry class 12?** To secure good marks in CBSE 12th Board Chemistry, students can cover easiest chapters first that include Biomolecules, Solutions, Chemistry in Everyday Life and Polymers. If you rate chapter on Biomolecules, it can be ranked lowest in difficulty level.

**Which set was hardest in chemistry class 12 2024?**

**Is 12th grade harder than 11th?** The difficulty of 12th grade largely depends on the classes you take and your workload. If you choose to enroll in advanced courses or continue with a rigorous course load, you may find it more challenging than 11th grade. However, many students feel prepared after their experiences in previous years.

**Which subject is easiest in class 12?** The perception of which subject is easiest can vary among students, but typically, subjects like Physical Education (PE), Home Science, and some Humanities subjects are often considered relatively easier in CBSE class 12.

**What is the easiest subject in the world?**

**Which topic is very important in chemistry?**

**What are the topics in chemistry grade 12?**

**Which is the most scoring chapter in class 12 chemistry?** Electro Chemistry and Chemical Kinetics are the most important chapters in the Physical Chemistry Unit for CBSE Board class 12. These comprise 16 marks in the final exam. The Important and must to do chapters from the Inorganic Section include Coordination Compounds and d and f block elements.

**What are the topics for year 12 chemistry?**

**Is engineering statics a hard class?** Statics is a very fundamental engineering course that you need to know how to pass or otherwise you will struggle in later courses. Although Statics is a difficult class, it can be broken down into simple concepts which you can use to solve problems.

**How hard is statics and mechanics of materials?** Statics and strength of materials is huge to understand. Although they are very difficult concepts at times and it may seem impossible to wrap your head around everything, at least understand the basics. Both in an academic and an industry setting.

**What is statics in engineering mechanics?** Explanation, Statics is the branch of mechanics that deals with bodies at rest or forces in equilibrium. Static equilibrium is a physical state in which the net force through the system is zero and the system's components are at rest. Electrostatics is a branch of physics that deals with electric charges at rest.

**Does mechanical engineering have statics?** The fundamental subjects required for mechanical engineering usually include: Mathematics (in particular, calculus, differential equations, and linear algebra) Basic physical sciences (including physics and chemistry) Statics and dynamics.

**What are the top 5 hardest engineering courses?** The top 5 most difficult engineering courses in the world are nuclear engineering, chemical engineering, aerospace engineering, biomedical engineering and civil engineering.

**Is Statics harder than calculus?** AP Statistics tends to be more focused on data analysis and interpretation, working with probability, and understanding statistical tests. It's generally considered easier conceptually than AP Calculus and involves less complex algebra.

**What is the hardest course in mechanical engineering?** Thermodynamics: This course deals with energy and its conversion between different forms. You'll study topics like heat transfer, work, and the first and second laws of thermodynamics. The complex theories and equations can be quite challenging.

**How to survive statics?** Do practice problems. Surviving a statistics course without practice is almost impossible. Practicing lets you actively learn and understand the course material. You can begin your practice with the exercises your professor offers you and look for other practice problems to help you grasp all the necessary concepts.

**Which is harder statics or dynamics?** Studying engineering dynamics is much more challenging than engineering statics because to solve a dynamics problem, you need to include extra forces. More the number of forces, the more complicated it becomes.

**What is a real life example of statics?** Practical examples of statics include a book on a shelf (representing equilibrium of forces) and a stationary vehicle where the weight is distributed evenly among the tires.

**What is taught in a statics class?** Topics include vector analysis, two- and three-dimensional equilibrium, structures, centroids, area moment of inertia and multiple approaches to shear and moment diagrams.

**Which engineering uses statics?** Statics is an essential prerequisite for many branches of engineering, such as mechanical, civil, aeronautical, and bioengineering, which address the various consequences of forces.

**What math is best for mechanical engineering?** If you are interested in mechanical engineering as a career, you need to take courses in geometry, trigonometry, and calculus. Physics and chemistry courses are also recommended, as is mechanical drawing or computer-aided design, if they are offered at your high school.

**Is mechanical engineering math heavy?** Mechanical engineering, like many other types of engineering, requires students to have a strong foundation in mathematics. Most colleges and universities require students to take at least one math course as part of their general education course curriculum.

**What are the four types of mechanical engineering?**

**Which engineering has the highest salary?**

**Which is the rarest engineering course?**

**Which degree is the toughest in the world?**

**Is statics math hard?** It involves many mathematical concepts, so students who are not very good at maths may struggle. The formulas are also arithmetically complex,

making them difficult to apply without errors.

**What math class is hardest?** 1. Real Analysis: This is a rigorous course that focuses on the foundations of real numbers, limits, continuity, differentiation, and integration. It's known for its theoretical, proof-based approach and can be a paradigm shift for students used to computation-heavy math courses.

**Should I do stats or calc?** If you plan to study engineering, physics, or mathematics in college, taking AP Calculus will be more beneficial as it's a prerequisite for many college-level courses in these fields. If you're leaning towards social sciences, psychology, business, or data-focused fields, AP Statistics might be more applicable.

**What is the easiest engineering class?**

**Is statics math hard?** It involves many mathematical concepts, so students who are not very good at maths may struggle. The formulas are also arithmetically complex, making them difficult to apply without errors.

**Which is harder, statics or dynamics?** Studying engineering dynamics is much more challenging than engineering statics because to solve a dynamics problem, you need to include extra forces. More the number of forces, the more complicated it becomes.

**What is the hardest math class for engineering majors?** Fields like electrical, computer, or biomedical engineering often require the most advanced and complex mathematics, including calculus, differential equations, linear algebra, and probability.

Applied Second Law Analysis of Heat Engine Cycles. External Combustion Engines. The Proceedings of the International symposium on diagnostics and modeling of combustion in internal combustion engines. COMODIA. DE2-3: In-cylinder Stratification of External EGR Gas for Diesel Combustion(DE: Diesel Engine Combustion,General Session Papers). DE2-3: In-cylinder Stratification of External EGR Gas for Diesel Combustion(DE: Diesel Engine Combustion,General Session Papers). Environment International. Environment International. 5549032 Low-pollution high-power external combustion engine. Combustion Engines. Combustion

Engines. Impact of external interferences on vibroacoustic signals coming from combustion engine during cold test.

In the paper is presented impact of external interferences on vibroacoustic signals coming from a spark ignition engine's vibrations in cold test performed on engine assembly line. As the basis to the analysis were used signals of piezoelectric sensor mounted on cylinder block of the engine driven by electric motor. In course of the testing it has been used the order tracking analysis of the vibrations during the cold test, while experimental results were used to statistic analysis of significance of influence with use of the MiniTab computer program. The main objective of the investigations was to verify actually obtained vibroacoustic signals and to minimize interferences coming from the measuring system. It should contribute to reduction of tolerance limits and improved detection of faulty engines with use of vibroacoustic methods. The investigations have shown significant impact of contact surface of the cylinder block with the sensor and impact of deformations of compression spring on results of recorded vibroacoustic signal. Such impact should be taken into considerations in numerical analysis of the signal. It has been proposed to perform activities to reduce influence of the interferences on recorded signals. Results of the investigations have been already utilized in production cold tests of spark ignition engines.

. Journal of Cleaner Production. Journal of Cleaner Production. 5426940 Free piston external combustion engine. Applied Energy. Applied Energy. Solid oxide fuel cell–internal combustion engine hybrid system utilizing an internal combustion engine for anode off-gas recirculation, external reforming, and additional power generation. SAE Technical Paper Series. The External Combustion Piston Engine (ECPE). Proceedings of the 24th Intersociety Energy Conversion Engineering Conference. External combustion engine with Stirling open cycle. Engineering. ENG. The Myth of the High-Efficiency External-Combustion Stirling Engine. Combustion Engines. Combustion Engines. External speed–torque characteristics of Fiat 0.9 TwinAir petroland CNG-fuelled engine.

The paper presents the results of the experimental study of the turbocharged spark ignition Fiat 0.9 TwinAir engine, with indirect, multipoint petrol injection system, powered by petrol and equipped with the injection system of the compressed natural gas (CNG) supplying gas into the intake manifold. The test results provide the

comparison of the selected fuel-efficiency, energetic and ecologic indicators of engine work, obtained when it is powered by Pb95 petrol and the CNG gas. The paper compares the external torque-speed characteristics with factory-set engine controllers. Also presented are the concentration levels of harmful gases in the exhaust fumes: carbon monoxide (CO), nitric oxides (NO<sub>x</sub>), hydrocarbons (HC) and carbon dioxide (CO<sub>2</sub>). Results obtained on the engine powered by CNG are indicating lower power and torque, lower concentration of hazardous gases, in particular carbon monoxide and hydrocarbons as well as significantly lower consumption of the gas when compared to petrol.

. ASME 2010 4th International Conference on Energy Sustainability, Volume 1. A Compact External Combustion Engine With High Part-Load Efficiency.

An external combustion engine design using steam is described which has good efficiency at full power and even better efficiency at the low power settings common for passenger vehicles. The engine is compact with low weight per unit power. All of its components fit in the engine compartment of a front-wheel drive vehicle despite the space occupied by the transaxle. It readily fits in a rear-drive vehicle. Calculated net efficiencies, after accounting for all losses, range, depending on engine size, from 28–32% at full power increasing to 33–36% at normal road power settings. A two-stage burner, 100% excess air, and combustion temperature below 1500°C assure complete combustion of the fuel and negligible NO<sub>x</sub>. The engine can burn a variety of fuels and fuel mixes, which should encourage the development of new fuels. Extensive software has been written that calculates full power and part-load energy balances, structural analysis and heat transfer, and performance in specified vehicles including using SAE driving cycles. Engines have been sized from 30 to 3200 hp. In general, fuel consumption should be at least 1.5 times lower than gasoline engines and about the same as diesels operating at low to moderate load settings. Due to this analysis, a prototype, when built, should perform as expected.

. Proceedings of the 25th International Congress of Mechanical Engineering.

THERMODYNAMIC ANALYSIS OF ADIABATIC EXTERNAL COMBUSTION

ENGINE. Vanderbilt Undergraduate Research Journal. VURJ. Design of an External Combustion Engine and its Application in a Free Piston Compressor.

The design of a free piston compressor and an analysis on integrating an external combustion engine into the compressor design are presented in this article. A free

piston compressor is a device which converts chemical energy to work on a volume of air through the kinetic energy of an inertia driven piston, which is not rigidly attached to a ground. An external combustion engine serves as an intermediate chamber which transfers combustion gases to a device to perform some work. The following discusses the design and experiments on an external combustion engine, with a focus on eliminating an injection holding force on a free piston compressor's elastomeric membranes. The efficiency of the external combustion engine to transfer energy without significant losses due to heat, dead volume, air/fuel mixtures, and actuated valve speed are also presented.

. Internal Combustion Engines. ICE. RESEARCH OF THE COMBUSTION PARAMETERS OF GASOLINE WITH ADDITIONAL HYDROGEN IN A SPARK-IGNITION ENGINE IN EXTERNAL SPEED CHARACTERISTIC MODES.

The directions of development and improvement of road transport around the world are inextricably linked to the desire to reduce the use of cars "on traditional fuels" due to limited oil and environmental safety of mankind. Since the modes of external speed characteristic are the most typical for the operation of cars in cities, the study of environmental performance of engines in these modes is an urgent task. Therefore, finding ways to reduce carbon dioxide emissions from automobile engines at high-speed modes is an urgent task. The rapid growth in the number of cars with internal combustion engines and the inevitable decline in world oil reserves necessitate the development and implementation of energy-saving technologies and the use of alternative fuels. Research aimed at finding ways to improve the fuel efficiency and environmental performance of automotive engines is relevant. One of the promising areas is the influence on the combustion process in gasoline engines by using additives of alternative fuels, which include hydrogen. The presented study of the parameters of combustion of gasoline with hydrogen additive in a spark ignition engine at external speed characteristics is a comprehensive analysis of the combustion process of a gasoline-hydrogen mixture and determination of its effect on the concentration of carbon dioxide in exhaust gases by developing a mathematical model that takes into account the composition of the mixture components and features of the combustion process, allows for sufficiently accurate calculation of the operating process of an engine with hydrogen additive at 10%, its identification by the results of experiments. In the course of the study,



dependencies were developed to determine the combustion parameters of the Wiebe model, taking into account the addition of hydrogen to gasoline in the modes of external speed characteristics, and the effect of hydrogen addition on the concentration of CO<sub>2</sub> in exhaust gases was analyzed. It is shown that with an increase in the hydrogen additive to 10% by mass fraction to gasoline, there is a decrease in CO<sub>2</sub> emissions to almost 30% in the external speed characteristic modes, which corresponds to modern environmental standards for gasoline internal combustion engines.

. SAE Technical Paper Series. Combustion Stimulation by External Gas Jet in an SI Piston Engine. Proceedings of the 24th Intersociety Energy Conversion Engineering Conference. A numerical method to evaluate heat exchangers performance of external combustion engine. Applied Mechanics and Materials. AMM. Application of Schlieren Optical Visualization System in External Combustion and Internal Combustion Engine: A Review.

Schlieren optical visualization technique system is the unique technique due to the ability in producing a neutral image easily-interpretable image of refractive-index-gradient areas. The Schlieren system provides a method for viewing the flow through the transparent media and the most using this technique is to photograph the flow. This paper presents the review of the application of the Schlieren optical visualization system external and internal combustion engine in order to observe the fuel-air mixing and flame development during the burning process. The basic technique of Schlieren system, especially for Z-type and two mirror Schlieren system provide a powerful and clearly image to visualize the changes of the density in a transparent medium. This method can capture spray evaporation, spray interference and mixture formation clearly with real images. Analysis of optical image visualization observations reveals that the mixture formation of fuel and air exhibits the influence of the ignition and flame development. Thus, the observation of systematic control of the creation of a mixture of experimental apparatus allows us to achieve significant progress in the combustion process and will present the information to understanding the basic terms of reduced fuel consumption and exhaust emissions.

. ASME 2006 Internal Combustion Engine Division Spring Technical Conference (ICES2006). Study of Combustion Anomalies of H<sub>2</sub>-ICE With External Mixture

Formation.

Although hydrogen is considered one of the most promising future energy carriers, there are several challenges to achieving a “hydrogen economy,” including finding a practical, efficient, cost-effective end-use device. Using hydrogen as a fuel for internal combustion engines is seen as a bridging technology toward a large-scale hydrogen infrastructure. To facilitate high-efficiency, high-power-density use of hydrogen with near-zero emissions in an internal combustion engine, detailed analysis of the hydrogen combustion process is necessary. This paper presents thermodynamic results regarding engine performance and emissions behavior during investigations performed on a single-cylinder research engine fueled by pressurized gaseous hydrogen. Avoiding combustion anomalies is one of the necessary steps to further improve the hydrogen engine power output at high-load operation while, at the same time, reducing fuel consumption and emissions during part-load operation. The overall target of the investigations is an improved combustion concept especially designed for hydrogen-engine-powered vehicles. Future activities include performing optical imaging of hydrogen combustion by using an endoscope. We will also investigate supercharged external mixture formation, as well as hydrogen direct-injection operation.

. Proceedings of the Combustion Institute. Proceedings of the Combustion Institute. Demonstration of an external combustion micro-heat engine. Journal of Applied Physics. Optimization of a model external combustion engine.

Using the Pontryagin maximum principle we optimize the operating conditions of a model external-combustion engine to obtain maximal efficiency. The model engine consists of a cylinder equipped with a piston containing a gas, pumped with a given time-dependent rate of heating, and coupled to a heat bath. We consider a fully cyclic engine, wherein both the volume and the energy of the working fluid are periodic. Such engines possess a finite optimal compression ratio. The gain in efficiency over nonoptimal paths is significant. We demonstrate the results with a numerical example, and we perform a thermodynamic analysis.

**Why is general topology important?** The most important of these types of functions are the continuous functions. In fact one purpose of general topology is to set up a notion of continuous functions in a general setting. Definition 13. Let  $f : X \rightarrow Y$  ?

Y be a function between topological spaces.

**What is basic topology?** Topology studies properties of spaces that are invariant under any continuous deformation. It is sometimes called "rubber-sheet geometry" because the objects can be stretched and contracted like rubber, but cannot be broken. For example, a square can be deformed into a circle without breaking it, but a figure 8 cannot.

**What are the 4 topological concepts?** According to Dienes and Holding (1972), four topological concepts are highlighted: enclosure, continuity, proximity, and division, which are important in the development of spatial notions in the baby until early childhood.

**What is the usual topology?** The usual topology on the real numbers  $\mathbb{R}$  is the standard topology, which is generated by the basis of open intervals  $(a, b)$ , where  $a$  and  $b$  are real numbers.

**What is the hardest math course?**

**Which topology is best and why?** Star topology is the most commonly used topology system. Every node connects to a central network device in this layout, like a hub, switch or computer. Star topology is centralized in nature, making it user-friendly, reliable, and easy to manage.

**Why do we need topology?** Simply put, network topology helps us understand two crucial things. It allows us to understand the different elements of our network and where they connect. Two, it shows us how they interact and what we can expect from their performance.

**Which is simplest topology?** Point-to-Point. Point-to-point topology is the simplest of all the network topologies. The network consists of a direct link between two computers. This is faster and more reliable than other types of connections since there is a direct connection.

**What is the most basic topology?** Point-to-point network topology is the simplest method. This type of network topology involves connecting two nodes or devices using a common link. The two devices could be two computers, servers, routers or

switches connected to each other with a cable.

**Why is topology difficult?** Algebraic topology, by its very nature, is not an easy subject because it's really an uneven mixture of algebra and topology unlike any other subject you've seen before. However, how difficult it can be to me depends on how you present algebraic topology and the chosen level of abstraction.

**Who is the father of topology?** He indicates that Riemann was the first to understand that topology could be separated from geometry to the benefit of both. Poincaré comes on the scene as the natural heir to Riemann and as the father of topology.

**What is a real life example of topology?** It has numerous real-life applications across various fields. Imagine you have a rubber band and a clay ball. If you can stretch and squish the rubber band and the clay ball in any way you want without tearing or cutting them, they're considered the same in topology.

**What is the basic of topology?** Topology (from the Greek words *τόπος*, 'place, location', and *λόγος*, 'study') is the part of mathematics concerned with the properties of a geometric object that are preserved under continuous deformations, such as stretching, twisting, crumpling, and bending; that is, without closing holes, opening holes, tearing, ...

**What is the most famous topology?** Star topology is by far the most common. Within this framework, each node is independently connected to a central hub via a physical cable—thus creating a star-like shape. All data must travel through the central node before it reaches its destination.

**What is a good topology?** Clean, good topology means the underlying mesh of the model is evenly distributed with consideration given to areas that bend a lot like the eyes, shoulders, and elbows. In some cases, these areas will consist of denser mesh such as armpits or near the mouth.

**Is Harvard Math 55 real?** Math 55 is officially composed of two parts, Math 55A: “Studies in Algebra and Group Theory” and Math 55B: “Studies in Real and Complex analysis.” The department classifies the class alongside Math 22 and 25 as one of “three introductory courses for people with strong math interests coming into

Harvard.”

**Why is calculus so hard?** You have to wrestle with new vocabulary, new symbols, and new processes. The problems are often longer and more involved, sometimes taking a full page or more of written work to complete. Those are the obvious reasons why calculus is hard.

**How hard is math 25 at Harvard?** Math 22, 25 and 55 are the three introductory courses for people with strong math interests coming into Harvard. Math 25 and 55 are much more intensive than Math 22, but require much more out of class time.

**Which topology is fastest?** The point-to-point topology is the fastest among all the types of topology. It has only two devices connected. However, it is not practical as your network has more nodes. This topology has high data transfer rates because the communication can use the entire bandwidth.

**What is the strongest topology?** The norm topology itself is sometimes called the strong topology, but more generally it is a polar topology of a dual pair. If  $X$  is a Banach space, with continuous dual  $X'$ , then the weakest topology on  $X'$  making each linear functional in  $X'$  continuous is called the weak topology.

**Which is the most complicated topology?** However, a mesh topology is the most costly and complicated topology, because it requires a lot of cables, devices, and management. Also, it is not suitable for large networks, because it can create too much overhead and complexity.

**Is it worth studying topology?** Studying topology is a great way to build up mathematical maturity. However, I'd say it's very difficult to see the "point" of topology without taking a proof-based real analysis class (where you use epsilons and deltas to prove things about sequences, limits, derivatives, integrals, etc.).

**Who invented topology?** The term "topology" was introduced by Johann Benedict Listing in 1847, although he had used the term in correspondence some years earlier instead of previously used "Analysis situs". The foundation of this science, for a space of any dimension, was created by Henri Poincaré.

**Is topology useful in physics?** Topology is the study of properties of systems that remain unchanged as the system is continuously bent, twisted, or otherwise deformed. Over the past century, topology has come to be recognized as being of central importance in physics.

**Which topology is best why?** A mesh topology offers high performance, reliability, and security, as there is no congestion, collision, or dependency in the network, and a single failure does not affect the whole network. It also offers high flexibility and redundancy, as you can choose the best path for data transmission and routing.

**Which topology is most stable?** The topology with highest reliability is 'mesh topology'. This type of topology contains at least two nodes with two or more paths between them.

**Which is the cheapest topology?** Bus topology is the easiest and cheapest type of topology to install. With a one-to-one ratio of devices to drop lines, this topology requires less cable than other topologies, reducing the installation time and expenses. Adding new devices to the network is also straightforward.

**Why is topology important in real life?** What are the real-life applications of topology? Topology finds applications in various fields such as network design, data analysis, robotics, materials science, biology, and physics. It helps understand shapes, connectivity, and spatial relationships in complex systems.

**What is the importance of topology?** Simply put, network topology helps us understand two crucial things. It allows us to understand the different elements of our network and where they connect. Two, it shows us how they interact and what we can expect from their performance.

**Why are topological spaces important?** A topological space is the most general type of a mathematical space that allows for the definition of limits, continuity, and connectedness.

**Why is logical topology useful?** The logical topology ensures optimal flow control that can be regulated within network. The data can either flow in a linear pattern called Logical bus or in form of a circle Logical ring.

**What is the real world application of topology?** Topology has been used to study various biological systems including molecules and nanostructure (e.g., membraneous objects). In particular, circuit topology and knot theory have been extensively applied to classify and compare the topology of folded proteins and nucleic acids.

**What problems does topology solve?** Topology can help us solve all kinds of mathematical problems where distances and size don't matter, only the structure of a shape. A classic example is the Seven Bridges of Königsberg<sup>2</sup> where it is asked: can you cross all 7 Bridges in Königsberg in one round trip?

**What is the main purpose of network topology?** Network topology is used to describe the physical and logical structure of a network. It maps the way different nodes on a network--including switches and routers--are placed and interconnected, as well as how data flows.

**Why do we need good topology?** A model with good topology will have a pleasing wireframe. Such maintained topology will help you when you try to sell your model. People also look at the wireframe of the model and thus it becomes important to have an organized topology in 3D modeling.

**What is topology and its advantages?** Point-to-point topology This type of network topology refers to two devices that are linked to each other through a dedicated connection, such as a router and a workstation. Advantages: Simple, inexpensive setup and fast, secure, and reliable data transfer between the devices.

**Is topology useful in physics?** Topology is the study of properties of systems that remain unchanged as the system is continuously bent, twisted, or otherwise deformed. Over the past century, topology has come to be recognized as being of central importance in physics.

**How useful is topology?** Topology is typically used to prove limit theorems and study algorithm behavior. It's pretty important in that respect. However, for applied stuff, it's less important to know well. As long as you can read the papers related to the algorithms you're using and understand them, you're fine.

**Who invented topology?** Johann Benedict Listing (1802-1882) was the first to use the word topology.

**Why is topology important in economics?** Many other economic theories, such as the microeconomic general equilibrium theory, largely depend on topological theorems. Moreover, analyzing different topological networks of economic systems can provide mathematical insight into how the society is financially functioning.

**Why do we need topological space?** Topological spaces provide a general framework for the study of convergence, continuity, and compactness. The fundamental structure on a topological space is not a distance function, but a collection of open sets; thinking directly in terms of open sets often leads to greater clarity as well as greater generality.

**What is important about topology?** The importance of topology as a branch of mathematics, however, arises from its more general consideration of objects contained in higher-dimensional spaces or even abstract objects that are sets of elements of a very general nature.

**Which topology is most important?** Star topology is by far the most common. Within this framework, each node is independently connected to a central hub via a physical cable—thus creating a star-like shape. All data must travel through the central node before it reaches its destination.

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