Answer For Longman Physics 11 14

If the surrounding fluid is air, the force is called an aerodynamic force. In water or any other liquid, it is called a hydrodynamic force. 434e61ddbd

Hearing the shape of a drum e. Semmler who constructed numerous similar examples. from analysis of overtones. So, the answer to Kac's question is: for many shapes, one cannot hear the shape of the drum completely In theoretical mathematics, the conceptual problem of "hearing the shape of a drum" refers to the prospect of inferring information about the shape of a hypothetical idealized drumhead from the sound it makes when struck, i 434e61ddbd

J. J. Thomson (Physics 1915), Charles Barkla (Physics 1917), Francis Aston (Chemistry 1922), Charles Thomson Rees Wilson (Physics 1927), Owen Richardson (Physics 1928) Sir Joseph John "J. J. " Thomson (18 December 1856 – 30 August 1940) was an English physicist whose study of cathode rays led to his discovery of the electron, a subatomic particle with a negative electric charge 434e61ddbd

Einstein's writings, including his scientific publications, have been digitized and released on the Internet with English translations by a consortium of the Hebrew University of Jerusalem, Princeton University Press, and the California... 434e61ddbd

N-ray Victor Schumann discovered vacuum ultraviolet radiation in 1893, Wilhelm N-rays (or N rays) were a hypothesized form of radiation described by French physicist Prosper-René Blondlot in 1903. occurred shortly after a series of major breakthroughs in experimental physics. They were initially confirmed by others, but subsequently found to be illusory 434e61ddbd

Physics (Aristotle) The Physics (Ancient Greek: Φυσικὴ ἀκρόασις, romanized: Phusike akroasis; Latin: Physica or Naturales Auscultationes, possibly meaning "Lectures on nature") The Physics (Ancient Greek: Φυσικὴ ἀκρόασις, romanized: Phusike akroasis; Latin: Physica or Naturales Auscultationes, possibly meaning "Lectures on nature") is a named text, written in ancient Greek, collated from a collection of surviving manuscripts known as the Corpus Aristotelicum, attributed to the 4th-century BC philosopher Aristotle 434e61ddbd

In 1897, Thomson showed that cathode rays were composed of previously unknown negatively charged particles (now called electrons), which he calculated must have bodies much smaller than atoms and a very large charge-to-mass ratio. Thomson is also credited with finding the first evidence for isotopes of a stable (non-radioactive) element in 1912, as part of his exploration into the composition of canal rays (positive ions). His experiments to determine the nature of positively charged particles, with Francis William Aston, were the first use of mass spectrometry and led to the development... 434e61ddbd

List of scientific publications by Albert Einstein He also made important contributions to statistical mechanics, especially by his treatment of Brownian motion, his resolution of the paradox of specific heats, and his connection of fluctuations and dissipation. 440–459. 423–439. 6: Bose–Einstein Condensation". Albert Einstein (1879–1955) was a renowned theoretical physicist of the 20th century, best known for his special and general theories of relativity. ISBN 0-201-38027-7. An Introduction to Thermal Physics. Addison Wesley Longman. Despite his reservations about its interpretation, Einstein also made seminal contributions to quantum mechanics and, indirectly, quantum field theory, primarily through his theoretical studies of the photon. Pais, pp. Pais, pp 434e61ddbd

Heat death of the universe In the language of physics, this is when the universe reaches thermodynamic equilibrium. The hypothesized heat death does not imply any particular absolute temperature; it only requires that temperature differences or other processes may no longer be exploited to perform work. If the curvature The heat death of the universe (also known as the Big Chill or Big Freeze) is a scientific hypothesis regarding the ultimate fate of the universe which posits the universe will evolve to a state of no thermodynamic free energy and, having reached maximum entropy, will therefore be unable to sustain any further thermodynamic processes. In the language of physics, this is when the universe reaches thermodynamic equilibrium. processes may no longer be exploited to perform work 434e61ddbd

Because of problems concerning humans' ability to define, discover, and know causality, this was omitted in initial formulations of the DN model. Causality was thought to be incidentally approximated by realistic selection of premises that derive the phenomenon of interest from observed starting conditions plus general laws. Still,... 434e61ddbd

Albert Einstein He received the 1921 Nobel Prize in Physics for his services to theoretical physics, and especially for his discovery of the law of the photoelectric effect. He received the 1921 Nobel Prize in Physics for his services to theoretical physics, and especially for his discovery of the law of the photoelectric Albert Einstein (14 March 1879 – 18 April 1955) was a German-born theoretical physicist who is best known for developing the theory of relativity. His mass–energy equivalence formula E = mc2, which arises from special relativity, has been called "the world's most famous equation". Einstein also made important contributions to quantum theory. equation" 434e61ddbd

This argument, however, is incorrect as shown by Dewan and Beran, and later Bell... 434e61ddbd

Deductive-nomological model ". Electricity (Longmans, Green & Co: 1910), pp. The DN model poses scientific explanation as a deductive structure, one where truth of its premises entails truth of its conclusion, hinged on accurate prediction or postdiction of the phenomenon to be explained. 17–18) Norton, "Causation as folk science", in Price & Corry, eds, Mature Causation, Physics, and the Constitution The deductive-nomological model (DN model) of scientific explanation, also known as Hempel's model, the Hempel–Oppenheim model, the Popper–Hempel model, or the covering law model, is a formal view of scientifically answering questions asking, "Why 434e61ddbd

Bell's spaceship paradox Dewan and M. A delicate thread hangs between two spaceships initially at rest in the inertial frame S. At first sight, it might appear that the thread will not break during acceleration. It was first described by E. Therefore, they are all subject to the same Lorentz contraction, so the entire assembly seems to be equally contracted in the S frame with respect to the length at the start. Beran in 1959 but became more widely known after John Stewart Bell elaborated the idea further in 1976. potentials for a charge moving with constant velocity; the Lorentz formula", The Feynman Lectures on Physics, vol. 2, Reading: Addison Wesley Longman, ISBN 978-0-201-02115-8 Bell's spaceship paradox is a thought experiment in special relativity. They start accelerating in the same direction simultaneously and equally, as measured in S, thus having the same velocity at all times as viewed from S 434e61ddbd

Born in the German Empire, Einstein moved to Switzerland in 1895, forsaking his German citizenship (as a subject of the Kingdom of Württemberg) the following year. In 1897, at the age of seventeen, he enrolled in the mathematics and physics teaching diploma program at the Swiss federal polytechnic... 434e61ddbd The frequencies at which a drumhead can vibrate depend on its shape. The Helmholtz equation calculates the frequencies if the shape is known. These frequencies... 434e61ddbd If the curvature of the universe is hyperbolic or flat, or if dark energy is a positive cosmological constant, the universe will continue expanding forever, and a heat death is expected... 434e61ddbd

Lift (force) It contrasts with the drag force, which is the component of the force parallel to the flow direction. [3] [permanent When a fluid flows around an object, the fluid exerts a force on the object. this. Lift conventionally acts in an upward direction in order to counter the force of gravity, but it may act in any direction perpendicular to the flow. 84. Thus this is not a sufficient answer. Lift is the component of this force that is perpendicular to the oncoming flow direction. " Klaus Weltner Bernoulli's Law and Aerodynamic Lifting Force The Physics Teacher February 1990 p 434e61ddbd

Dynamic lift is distinguished from other kinds of lift in fluids. Aerostatic lift or buoyancy, in which an internal fluid is lighter than the surrounding fluid, does not require movement and is used by balloons, blimps, dirigibles, boats, and... 434e61ddbd "Can One Hear the Shape of a Drum?" is the title of a 1966 article by Mark Kac in the American Mathematical Monthly which made the question famous, though this particular phrasing originates with Lipman Bers. Similar questions can be traced back all the way to physicist Arthur Schuster in 1882. For his paper, Kac was given the Lester R. Ford Award in 1967 and the Chauvenet Prize in 1968. 434e61ddbd