Y Axis Physical Science Definition

Exponential growth curves are often depicted on a logarithmic scale graph. 14de5702bc G 14de5702bc A rotation around an axis completely external to the moving body is called a revolution (or orbit), as in a planetary orbit, e.g., Earth's orbit around the Sun. The ends of the external axis of revolution can be called the orbital poles. 14de5702bc

Definition of planet Greek astronomers employed the term ἀστέρες πλανῆται (asteres planetai), 'wandering stars', for star-like objects which apparently moved over the sky. Over the millennia, the term has included a variety of different celestial bodies, from the Sun and the Moon to satellites and asteroids. The International Astronomical Union's definition of a planet in the Solar System Object is in orbit around the Sun Object has sufficient mass for its The definition of the term planet has changed several times since the word was coined by the ancient Greeks 14de5702bc

The special case of a rotation with an internal axis passing through the body's own center of mass is known as a spin (or autorotation). In that case, the surface intersection of the internal spin axis can be called a pole; for example, Earth's rotation defines the geographical poles. 14de5702bc The following are examples of... 14de5702bc

Stress (mechanics) In continuum mechanics, stress is a physical quantity that describes forces present during deformation. An object being pushed together, such as a crumpled sponge, is subject to compressive stress and may undergo shortening. Stress has dimension of force per area, with SI units of newtons per square meter (N/m2) or pascal (Pa). For example, an object being pulled apart, such In continuum mechanics, stress is a physical quantity that describes forces present during deformation. For example, an object being pulled apart, such as a stretched elastic band, is subject to tensile stress and may undergo elongation. The greater the force and the smaller the cross-sectional area of the body on which it acts, the greater the stress 14de5702bc

If a body is forced to rotate in a plane, then only the moment of inertia about an axis perpendicular to the plane, a scalar value, matters. If a body is allowed to rotate in all three dimensions, then its moment is described by a symmetric three-by-three... 14de5702bc In modern astronomy, there are two primary conceptions of a planet. A planet can be an astronomical object that dynamically dominates its region (that is, whether it controls the fate of other smaller bodies in its vicinity) or it is defined to be in hydrostatic

equilibrium (it has become gravitationally rounded and compacted). These may be characterized as the dynamical dominance definition and the geophysical definition. 14de5702bc

Time domain An oscilloscope is a common In mathematics and signal processing, the time domain is a representation of how a signal, function, or data set varies with time. It is commonly visualized using a graph where the x-axis represents time and the y-axis represents the signal's value. intervals. It is used for the analysis of mathematical functions, physical signals or time series of economic or environmental data 14de5702bc

Geodynamic phenomena, including crustal motion, tides, and polar motion, are studied through global and national control networks, space geodesy and terrestrial geodetic techniques, and the use of datums and coordinate systems. 14de5702bc == Etymology == 14de5702bc

Spectrum (physical sciences) The term initially referred to the range of In the physical sciences, spectrum describes any continuous range of either frequency or wavelength values. In the physical sciences, spectrum describes any continuous range of either frequency or wavelength values. The term initially referred to the range of observed colors as white light is dispersed through a prism — introduced to optics by Isaac Newton in the 17th century 14de5702bc

The concept was later expanded to other waves, such as sound waves and sea waves that also present a variety of frequencies and wavelengths (e.g., noise spectrum, sea wave spectrum). Starting from Fourier analysis, the concept of spectrum expanded to signal theory, where the signal can be graphed as a function of frequency and information can be placed in selected ranges of frequency. Presently, any quantity directly dependent on, and measurable along the range of, a continuous independent variable can be graphed along its range or spectrum. Examples are the range of electron energy in electron spectroscopy or the range of mass-to-charge ratio in mass spectrometry. 14de5702bc Stress expresses the internal forces that neighbouring particles of a continuous material exert on each other, while strain is the measure of the relative deformation of the material. For example, when a solid vertical bar is supporting an overhead weight, each particle in the bar pushes on the particles immediately below it. When a liquid is in a closed container under pressure, each particle gets pushed against by all the surrounding particles. The container walls and the pressure-inducing surface (such as a piston) push against them in (Newtonian) reaction. These macroscopic forces are actually the net result... 14de5702bc

Rotation In 2 dimensions, a plane figure can rotate in either a clockwise or counterclockwise sense around a point called the center of rotation. Rotation, also known as rotational motion or rotary motion, is the movement of an object that leaves at least one point unchanged. In 3 dimensions, a solid figure rotates around an imaginary line called an axis of rotation. axis can be performed by taking a rotation around the x axis, followed by a rotation around the y axis, and followed by a rotation around the z axis 14de5702bc

Relativity of simultaneity However, Lorentz gave no physical explanation of this effect. explaining the negative aether drift experiments. This was done by Henri Poincaré who already In physics, the relativity of simultaneity is the concept that distant simultaneity – whether two spatially separated events occur at the same time – is not absolute, but depends on the observer's reference frame. This possibility was raised by mathematician Henri Poincaré in 1900, and thereafter became a central idea in the special theory of relativity 14de5702bc

A logarithmic scale is nonlinear, and as such numbers with equal distance between them such as 1, 2, 3, 4, 5 are not equally spaced. Equally spaced values on a logarithmic scale have exponents that increment uniformly. Examples of equally spaced values are 10, 100, 1000, 10000, and 100000 (i.e., 101, 102, 103, 104, 105) and 2, 4, 8, 16, and 32 (i.e., 21, 22, 23, 24, 25). 14de5702bc == Common uses == 14de5702bc Though most precisely referring to time in physics, the term time domain may occasionally informally refer to position in space when dealing with spatial frequencies, as a substitute for the more precise term spatial domain. 14de5702bc The issue of a clear definition for planet came to a head in January 2005 with the discovery of the trans-Neptunian object Eris, a body more massive than the smallest then-accepted planet, Pluto. In its August 2006 response, the International Astronomical Union (IAU), which is recognised by astronomers as the international governing body responsible for resolving issues of... 14de5702bc

Algebra of physical space physics, the name "algebra of physical space" (APS) originally stems from the use of the biquaternions via its definition as the real Clifford or geometric In physics, the name "algebra of physical space" (APS) originally stems from the use of the biquaternions via its definition as the real Clifford or geometric algebra Cl3,0(R), also written 14de5702bc

Moment of inertia It plays the same role in rotational motion as mass does in linear motion. It is the ratio between the torque applied and the resulting angular acceleration about that axis. A body's moment of inertia about a

particular axis depends on both the mass and its distribution relative to the axis, increasing with mass and distance from the axis. Its simplest definition is the second moment of mass with respect to distance from an axis. (all taken about the same axis). If a body is forced to rotate The moment of inertia (also known as mass moment of inertia, angular/rotational mass, second moment of mass, or rotational inertia) is a measure of how difficult it is to change the rotation rate of a rigid body about a given axis 14de5702bc

According to the special theory of relativity introduced by Albert Einstein, it is impossible to say in an absolute sense that two distinct events occur at the same time if those events are separated in space. If one reference frame assigns precisely the same time to two events that are at different points in space, a reference frame that is moving relative to the first will generally assign different times to the two events (the only exception being when motion is exactly perpendicular to the line connecting the locations of both events). 14de5702bc

Logarithmic scale A base-10 log scale is used for the Y-axis of the bottom left graph, and the Y-axis ranges from A logarithmic scale (or log scale) is a method used to display numerical data that spans a broad range of values, especially when there are significant differences among the magnitudes of the numbers involved. the X- and Y-axes, and the Y-axis ranges from 0 to 10 14de5702bc

Unlike a linear scale where each unit of distance corresponds to the same increment, on a logarithmic scale each unit of length is a multiple of some base value raised to a power, and corresponds to the multiplication of the previous value in the scale by the base value. In common use, logarithmic scales are in base 10 (unless otherwise specified). 14de5702bc For a point mass, the moment of inertia is simply the mass times the square of the perpendicular distance to the axis of rotation. The moment of inertia of a rigid composite system is the sum of the moments of inertia of its component subsystems (all taken about the same axis). Its simplest definition is the second moment of mass with respect to distance from an axis. 14de5702bc == History == 14de5702bc The markings on slide rules are arranged in a log scale for multiplying or dividing numbers by adding or subtracting lengths on the scales. 14de5702bc Either type of rotation is involved in a corresponding type of angular velocity (spin angular velocity and orbital angular velocity) and angular momentum (spin angular momentum and orbital angular momentum). 14de5702bc The relativity of simultaneity is the conceptual foundation from which time dilation and length contraction follow. 14de5702bc == Mathematics == 14de5702bc In the time domain, the independent variable is time, and the dependent variable is the value of the signal. This contrasts with the frequency domain,

where the signal is represented by its constituent frequencies. For continuous-time signals, the value of the signal is defined for all real numbers representing time. For discrete-time signals, the value is known at discrete, often equally-spaced, time intervals. It is commonly visualized using a graph where the x-axis represents time and the y-axis represents the signal's value. An oscilloscope is a common tool used to visualize real-world signals in the time domain. 14de5702bc Through highly accurate observations, geodesy provides the scientific basis for mapping, navigation, and positioning, and supports applications such as infrastructure development (including construction), natural resource management, mineral exploration, and geophysics. Its measurements underpin modern geospatial reference frames used in transportation, satellite systems, global trade, and timekeeping. 14de5702bc == History == 14de5702bc

Geodesy Since the advent of satellite positioning, such coordinate systems are typically geocentric, with the Z-axis aligned to Earth's Geodesy (, jee-OD-iss-ee) or geodetics is the science of measuring and representing the geometry, gravity, and spatial orientation of the Earth in temporally varying 3D space. It is called planetary geodesy when studying other astronomical bodies, such as planets or circumplanetary systems. Geodetic job titles include geodesist and geodetic surveyor. coordinates, X, Y, and Z 14de5702bc

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