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Conversion calculators can help you convert one unit of measurement or value into another. These systems of measurement include SI (International System of Units), U.S. customary units, and some British measurement units. Our conversion calculators are useful in science, engineering, finance, and everyday life when converting between different systems of unit measurement. Use unit conversion calculators to convert between measurements of length, weight, volume, temperature, currency, and more. You can also convert between decimal, percent and fractions, as well as numbers to words with our conversion calculators. Common examples of unit conversion include length or distance where you might want to convert measurements from miles to kilometers, feet to meters, or inches to centimeters. Temperature unit conversion converts temperatures between Fahrenheit, Celsius, and Kelvin scales. When dealing with international finance our currency conversion calculators convert monetary amounts from one currency to another given the current published exchange rates. While our conversion calculators do the mathematical conversions behind the scenes, you can read more on our calculator pages about how to do unit conversions. Typically you will multiply or divide a unit by a numerical unit conversion factor and round off resulting decimals as appropriate. We also provide charts of unit conversion factors where possible. Please provide values below to convert Fahrenheit [°F] to Celsius [°C], or vice versa. Definition: The Fahrenheit (symbol: °F) is a unit of temperature that was widely used prior to metrication. It is currently defined by two fixed points: the temperature at which water freezes, 32°F, and the boiling point of water, 212°F, both at sea level and standard atmospheric pressure. The interval between the freezing and boiling point is divided into 180 equal parts.History/Origin: The Fahrenheit scale was developed based on a measurement proposed in 1724 by the German physicist Daniel Gabriel Fahrenheit. He initially based the scale on an equal ice-salt mixture, selecting the values of 30°F for the freezing point of water, and 90°F for normal body temperature. He later adjusted the scale such that the melting point of ice was 32°F and body temperature was 96°F. He chose these values to simplify the degree markings he could make on his instruments, since this difference between the temperatures allowed him to mark degree lines by bisecting the interval six times. Later, when using the freezing and boiling points of water as fixed reference points for thermometers became popular, the scale was slightly re-defined such that there would be 180 degrees separating freezing and boiling point, resulting in normal human body temperature being approximately 98°F, rather than Fahrenheit's 96°F.Current use: Until the 1960's the Fahrenheit scale was the primary scale used in English-speaking countries. Today, most countries around the world use the Celsius temperature scale instead, many having made the change during their metrication processes (conversion to using the metric system of units). However, the Fahrenheit scale is still used as the official temperature scale in a number of countries, including the United States (as well as its unincorporated territories), the Bahamas, Belize, the Cayman Islands, and a few others.CelsiusDefinition: The Celsius (symbol: °C) is an SI (International System of Units) derived unit of temperature. It is defined based on the SI unit of temperature, the kelvin. The Celsius and Kelvin scales are precisely related, with a one-degree change in Celsius being equal to a one degree-change in kelvin. The kelvin (and thus Celsius) is defined based on the Boltzmann constant, k, which equals 1.380649 × 10-23 when expressed in the unit J·K-1, a unit equivalent to kg·m2·s-2·K-1. The kilogram, meter, and second, are defined based on Planck's constant, h, the speed of light, c, and cesium frequency, ΔνCs.History/origin: From 1743 until 1954, the Celsius scale was based on 0°C for the freezing point of water and 100 °C for the boiling point of water, both at a pressure of one standard atmosphere, using mercury as the working material. This was not always the case, and originally 0°C was defined as the boiling point of water and 100°C was defined as the melting point of snow. Celsius as a unit and a scale was not widely used until this original definition was inverted. In 1954, the unit, "degree Celsius," as well as the Celsius scale were again re-defined to instead be based on absolute zero (-273.15 °C) and the triple point of VSMOW (specially purified water). This is the definition that was used up until 2019, when the kelvin was redefined based on the definitions of the second, meter, and kilogram.Current use: The Celsius scale replaced the Fahrenheit scale in most countries in the mid to late 20th century. Almost all countries around the world use this scale, except for those in which the metric system has not been adopted, such as the United States. Even in countries like the United States however, Celsius is widely used within the scientific community—it just is not widely used in everyday temperature references.Fahrenheit [°F]Celsius [°C]0.01 °F-17.7722222222 °C0.1 °F-17.7222222222 °C1 °F-17.2222222222 °C2 °F-16.6666666667 °C3 °F-16.1111111111 °C5 °F-15 °C10 °F-12.2222222222 °C20 °F-6.6666666667 °C50 °F10 °C100 °F37.7777777778 °C1000 °F537.7777777778 °CExample: convert 50 °F to: °C50 °F = (50 - 32) × 5/9 = 10 °C Enter the temperature in degrees Fahrenheit below to convert it to degrees Celsius. There are a few formulas that you can use to convert a temperature in degrees Fahrenheit to degrees Celsius. °F to °C Conversion Formula Convert °F to °C using the widely accepted conversion formula: °C = (°F - 32) × 5/9 The temperature in degrees Celsius is equal to the temperature in degrees Fahrenheit minus 32, times 5, divided by 9. Insert the °F temperature measurement in the formula and then solve to find the result. For example, let's convert 50 °F to °C: 50 °F = (50 - 32) × 5/9 50 °F = 18 × 5/9 50 °F = 10 °C Alternate Fahrenheit to Celsius Formula The National Institute of Standards and Technology actually defines the following formula for the conversion:[1] °C = (°F - 32) ÷ 1.8 Ultimately this is a reduced version of the widely accepted formula shown above. How to Convert a Temperature Without a Calculator To convert Fahrenheit to Celsius without a calculator, you can use a simple rule of thumb. Subtract 30 from the temperature, then divide the result in half. Note that this is not a precise method, but rather a quick shortcut to get a rough conversion when you don't have a calculator handy. For example, let's use this shortcut to convert 70 °F to Celsius. Start by subtracting 30 from the temperature. 70 °F - 30 = 40 Then, divide it in half. 40 ÷ 2 = 20 So, 70 °F is roughly equal to 20 °C using this method. The Fahrenheit and Celsius scales are both used to measure temperature. Read on to learn more about each of them. Are you converting temperatures or cooking or baking? Try our oven temperature conversion calculator. Temperature Reference Points In °F and °C Temperature reference points expressed in degrees Fahrenheit and Celsius TemperatureDegrees FahrenheitDegrees Celsius Absolute Zero-459.67 °F-273.15 °C Freezing Point of Water32 °F0 °C Triple Point of Water32.018 °F0.01 °C Boiling Point of Water212 °F100 °C Surface of the Sun10,100 °F5,600 °C The Fahrenheit scale is a temperature scale that defines the melting point of water as 32 degrees and the boiling point of water at 212 degrees.[2] There are 180 intervals between 32 °F and 212 °F, each corresponding to one degree. The degree Fahrenheit is a US customary and imperial unit of temperature. Fahrenheit can be abbreviated as F; for example, 1 degree Fahrenheit can be written as 1 °F. Learn more about Fahrenheit. The Celsius temperature scale, also commonly referred to as the centigrade scale, is defined in relation to the kelvin. Specifically, degrees Celsius is equal to kelvins minus 273.15.[1] The degree Celsius is the SI derived unit for temperature in the metric system. A degree Celsius is sometimes also referred to as a degree centigrade. Celsius can be abbreviated as C; for example, 1 degree Celsius can be written as 1 °C. Learn more about Celsius. The chart below shows various temperatures in degrees Fahrenheit and the equivalent temperature in degrees Celsius. ReferencesNational Institute of Standards and Technology, SI Units – Temperature, Oceanic and Atmospheric Administration National Weather Service , Fahrenheit, Fahrenheit is a temperature scale named after the German physicist Daniel Gabriel Fahrenheit, who proposed it in 1724. In this scale, water freezes at 32 degrees Fahrenheit (°F) and boils at 212 degrees Fahrenheit at standard atmospheric pressure. This contrasts with the Celsius scale, commonly used in physics and other sciences, where water freezes at 0 degrees Celsius (°C) and boils at 100 degrees Celsius. The Fahrenheit scale is still commonly used in the United States for weather forecasts and in everyday applications. Fahrenheit is a scale used to measure temperature, represented by the symbol °F. It was developed by the German physicist Daniel Gabriel Fahrenheit in the early 18th century. On the Fahrenheit scale, the freezing point of water is 32 degrees Fahrenheit (°F) and the boiling point is 212 degrees Fahrenheit at standard atmospheric pressure. This scale is primarily used in the United States and a few other countries, whereas most of the world uses the Celsius scale (°C) for temperature measurements. To convert a temperature from Celsius to Fahrenheit, you can use the following formula: F = 9/5C+32 Where: F represents the temperature in degrees Fahrenheit, C represents the temperature in degrees Celsius. This formula multiplies the Celsius temperature by 9/5 (or 1.8) and then adds 32 to the result to find the equivalent temperature in Fahrenheit.. Let's say you have a temperature of 20 degrees Celsius and you want to convert it to Fahrenheit. You can use the formula: F = 9/5C+32 Substituting *CC* with 20: *F* = 9/5×20+32 *F* = 36+32 *F* = 68 So, 20 degrees Celsius is equivalent to 68 degrees Fahrenheit. Fahrenheit Scale: The Fahrenheit temperature scale is a way of measuring temperatures where 32°F is the freezing point of water and 212°F is the boiling point at standard atmospheric pressure. Daily Use: In everyday situations, especially in the United States, people use Fahrenheit to report weather temperatures. For instance, a comfortable room temperature might be around 68°F to 72°F. Conversion: If you need to convert Fahrenheit to Celsius, the formula is C = 95(F−32) Where *CC* is the temperature in Celsius and F is the temperature in Fahrenheit. AspectCelsius (°C)Fahrenheit (°F)Developed byAnders Celsius (1701–1744)Daniel Gabriel Fahrenheit (1686–1736)IntroducedMid-18th centuryEarly 18th centuryBase UnitDegree CelsiusDegree FahrenheitFreezing Point of Water0°C32°FBoiling Point of Water100°C at standard atmospheric pressure212°F at standard atmospheric pressureIncrement SizeOne degree Celsius is larger; each degree is equal to 1.8 degrees FahrenheitOne degree Fahrenheit is smaller; it takes more degrees to cover the same change in temperatureUsageUsed worldwide, except in the United States and a few other countriesPrimarily used in the United States, Bahamas, Belize, and a few other countriesConversion Formula to Other*F* = 95*C*+32 (To convert to Fahrenheit)*C* = 59(*F*−32) (To convert to Celsius) Absolute zero is the lowest possible temperature where all molecular motion stops. It's a theoretical limit in thermodynamics, representing the minimum internal energy a thermodynamic system can have. In the Fahrenheit scale, absolute zero is approximately -459.67 degrees Fahrenheit (°F). This temperature corresponds to -273.15 degrees Celsius (°C) and zero Kelvin (K), which are equivalent values in other temperature scales. Absolute zero is primarily used in scientific contexts, especially in physics and chemistry, to describe extreme conditions or theoretical states. The Fahrenheit scale is marked by several key points that relate to everyday phenomena, particularly in terms of water's behavior and human comfort levels. Here's an overview of some significant points on the Fahrenheit scale: Absolute Zero: -459.67°F (-273.15°C). This is the theoretical lowest temperature possible, where molecular motion ceases. Freezing Point of Water: 32°F (0°C). This is the temperature at which water freezes. Body Temperature: Around 98.6°F (37°C). This is considered the normal body temperature for humans. Boiling Point of Water: 212°F (100°C) at sea level. This is the temperature at which water boils. The Fahrenheit scale is divided into degrees, where each degree is 1/180 of the interval between the freezing point and boiling point of water at sea level. Here are some additional common reference points: Room Temperature: Typically around 68°F to 72°F (20°C to 22°C). Cold Day: Temperatures around or below 32°F (0°C) are typically considered cold, especially in climates accustomed to warmer weather. Hot Day: Temperatures around or above 90°F (32°C) are generally considered hot. Public Understanding: In regions where Fahrenheit is used, people are accustomed to interpreting weather conditions based on this scale. For example, temperatures in the 70s (°F) are generally perceived as comfortable, while temperatures dropping to the 30s or rising to the 90s carry specific, commonly understood connotations about the need for heating or cooling. Cultural Relevance: In the United States, people often discuss weather and temperature changes in Fahrenheit, making it a culturally relevant scale for everyday conversations. International Communication: Scientists typically use Celsius or Kelvin in academic and international contexts. Thus, students in Fahrenheit-using countries need to learn to convert between scales and understand scientific concepts in multiple units, which can add a layer of complexity to science education. Precision and Scale: The finer division in the Fahrenheit scale (where a degree Fahrenheit is smaller than a degree Celsius) can be advantageous in fields like meteorology and high-precision manufacturing, as it allows for detailed temperature distinctions without using decimals. Medical Temperature Readings: In the medical field, especially in the U.S., body temperature is usually measured in Fahrenheit. Thus, a normal body temperature is around 98.6°F, and slight deviations are easily recognizable in this scale. Public Health Communication: Health advisories about temperature-related conditions (like hypothermia or heat strokes) are given in Fahrenheit in the U.S., which is crucial for public understanding and safety. Cooking Instructions: Recipes in the U.S. are usually written with Fahrenheit temperatures. Understanding these temperatures is essential for cooking and baking precision. Food Safety Standards: Guidelines for food storage, handling, and cooking temperatures are often communicated in Fahrenheit to ensure safety against foodborne illnesses. HVAC Settings: Heating, ventilation, and air conditioning systems in the U.S. are calibrated in Fahrenheit, which influences how settings are adjusted in residential and commercial buildings. Material Science: The behavior of materials at different temperatures might be tested and documented using the Fahrenheit scale in certain U.S.-based industries. The Fahrenheit scale is not inherently more accurate, but it is more precise because it uses a smaller interval between degrees. This can make it useful in fields requiring fine temperature adjustments. One practical advantage is its precision without using decimals, which is useful in weather forecasting and HVAC settings. It's also historically and culturally embedded in the U.S., making it a familiar reference for most residents. Extreme temperatures, like those in Death Valley or Arctic regions, are reported in Fahrenheit in the U.S., providing immediate context and relevance for residents familiar with the scale. Add Tone Friendly Formal Casual Instructive Professional Empathetic Humorous Serious Optimistic Neutral 10 Examples of Public speaking 20 Examples of Gas lighting What is the freezing point of water in Fahrenheit? Choose the correct answer What is the boiling point of water in Fahrenheit? Choose the correct answer If a temperature is 68°F, what is it in Celsius? Choose the correct answer How do you convert Fahrenheit to Celsius? Choose the correct answer Choose the correct answer Convert 100°F to Celsius. Choose the correct answer Which of the following is a higher temperature? Choose the correct answer At what Fahrenheit temperature does water boil at sea level? Choose the correct answer If the temperature outside is 95°F, what is it in Celsius? Choose the correct answer What is the equivalent of 50°C in Fahrenheit? Choose the correct answer For daily wit & wisdom, sign up for the Almanac newsletter. What is 70°F in Celsius? What is 0°C in Fahrenheit? Here is the temperature conversion formula and chart to change Fahrenheit to Celsius or Celsius to Fahrenheit. We also have a Temperature Conversion Calculator for those who just want an answer!The conversion formulas we use are the standard ones in most textbooks. How Do You Convert Fahrenheit to Celsius?To convert temperatures in degrees Fahrenheit to Celsius, subtract 32 and multiply by .5556 (or 5/9).Example: (50°F - 32) x .5556 = 10°CHow Do You Convert Celsius to Fahrenheit?To convert temperatures in degrees Celsius to Fahrenheit, multiply by 1.8 (or 9/5) and add 32.Example: (30°C x 1.8) + 32 = 86°FHere are two handy charts that convert from F to C and also from C to F.Fahrenheit to Celsius Conversion ChartFahrenheitCelsius-40°F-40°C-30°F-34°C-20°F-29°C-10°F-23°C0°F-18°C10°F-12°C20°F-7°C32°F0°C40°F4°C50°F10°C60°F16°C70°F21°C80°F27°C90°F32°C100°F38°CCelsius to Fahrenheit Conversion ChartCelsiusFahrenheit-40°C-40°F-30°C-22°F-20°C-4°F-10°C14°F0°C32°F10°C50°F20°C68°F30°C86°F40°C104°F50°C122°F60°C140°F70°C158°F80°C176°F90°C194°F100°C212°FAbout Fahrenheit and CelsiusThe Fahrenheit temperature scale is named for German physicist Daniel Gabriel Fahrenheit and is the temperature measurement commonly used by the United States (and its associated territories) and several Caribbean nations. On the Fahrenheit scale, water freezes at 32°F and boils at 212°F (at sea level).The Celsius temperature scale—originally called centigrade and later renamed for Swedish astronomer Anders Celsius—is used almost everywhere else in the world. On the Celsius scale, the freezing point of water is 0°C, and the boiling point of water is 100°C (at sea level).Other Conversions BONUS: You'll also receive our free Beginner Gardening Guide! Temperature conversion Length conversion Area conversion Volume conversion Weight conversion Speed conversion Time conversion Angle conversion Pressure conversion Energy and power conversion iPhone and Android app Metric Conversion Table Fahrenheit conversion Celsius conversion Celsius to Fahrenheit Celsius to Kelvin Kelvin to Celsius Kelvin to Fahrenheit For other uses, see Fahrenheit (disambiguation). The Fahrenheit scale (/ˈfærənhaɪt, ˈfɑːr-/) is a temperature scale based on one proposed in 1724 by the German-Polish physicist Daniel Gabriel Fahrenheit (1686–1736).[1] It uses the degree Fahrenheit (symbol: °F) as the unit. Several accounts of how he originally defined his scale exist, but the original paper suggests the lower defining point, 0 °F, was established as the freezing temperature of a solution of brine made from a mixture of water, ice, and ammonium chloride (a salt).[2][3] The other limit established was his best estimate of the average human body temperature, originally set at 90 °F, then 96 °F (about 2.6 °F less than the modern value due to a later redefinition of the scale).[2] FahrenheitThermometer with Fahrenheit (marked on outer bezel) and Celsius (marked on inner dial) degree units.General informationUnit systemImperial/US customaryUnit ofTemperatureSymbol°FNamed afterDaniel Gabriel FahrenheitConversions x °F in ..... corresponds to ... SI base units 5/9(x +459.67) K SI derived units 5/9(x − 32) °C Imperial/US absolute scale x + 459.67 °Ra For much of the 20th century, the Fahrenheit scale was defined by two fixed points with a 180 °F separation: the temperature at which pure water freezes was defined as 32 °F and the boiling point of water was defined to be 212 °F, both at sea level and under standard atmospheric pressure. It is now formally defined using the Kelvin scale.[4][5] It continues to be used in the United States (including its unincorporated territories), its freely associated states in the Western Pacific (Palau, the Federated States of Micronesia and the Marshall Islands), the Cayman Islands, and Liberia. Fahrenheit is commonly still used alongside the Celsius scale in other countries that use the U.S. metrological service, such as Antigua and Barbuda, Saint Kitts and Nevis, the Bahamas, and Belize. A handful of British Overseas Territories, including the Virgin Islands, Montserrat, Anguilla, and Bermuda, also still use both scales.[6] All other countries now use Celsius ("centigrade" until 1948), which was invented 18 years after the Fahrenheit scale.[7] Fahrenheit temperature conversion formulae from Fahrenheit to Fahrenheit Celsius x °F ≙ (x − 32) × 5/9 °C x °C ≙ (x × 9/5 + 32) °F Kelvin x °F ≙ (x + 459.67) × 5/9 K x K ≙ (x × 9/5 − 459.67) °F Rankine x °F ≙ (x + 459.67) °R x °R ≙ (x − 459.67) °F For temperature intervals rather than specific temperatures,1 °F = 1 °R = 5/9 °C = 5/9 KConversion between temperature scales Historically, on the Fahrenheit scale the freezing point of water was 32 °F, and the boiling point was 212 °F (at standard atmospheric pressure). This put the boiling and freezing points of water 180 degrees apart.[8] Therefore, a degree on the Fahrenheit scale was 1⁄180 of the interval between the freezing point and the boiling point. On the Celsius scale, the freezing and boiling points of water were originally defined to be 100 degrees apart. A temperature interval of 1 °F was equal to an interval of 5⁄9 degrees Celsius. With the Fahrenheit and Celsius scales now both defined by the kelvin, this relationship was preserved, a temperature interval of 1 °F being equal to an interval of 5⁄9 K and of 5⁄9 °C. The Fahrenheit and Celsius scales intersect numerically at −40 in the respective unit (i.e., −40 °F corresponds to −40 °C). Absolute zero is 0 K, −273.15 °C, or −459.67 °F. The Rankine temperature scale uses degree intervals of the same size as those of the Fahrenheit scale, except that absolute zero is 0 °R – the same way that the Kelvin temperature scale matches the Celsius scale, except that absolute zero is 0 K.[8] The combination of degree symbol (°) followed by an uppercase letter F is the conventional symbol for the Fahrenheit temperature scale. A number followed by this symbol (and separated from it with a space) denotes a specific temperature point (e.g., "Gallium melts at 85.5763 °F"). A difference between temperatures or an uncertainty in temperature is also conventionally written the same way as well, e.g., "The output of the heat exchanger experiences an increase of 72 °F" or "Our standard uncertainty is ±5 °F". However, some authors instead use the notation "An increase of 50 F°" (reversing the symbol order) to indicate temperature differences. Similar conventions exist for the Celsius scale, see Celsius § Temperatures and intervals.[9][10] For an exact conversion between degrees Fahrenheit and Celsius, and kelvins of a specific temperature point, the following formulas can be applied. Here, f is the value in degrees Fahrenheit, c the value in degrees Celsius, and k the value in kelvins: f °F to c °C: c = f − 32/1.8 c °C to f °F: f = c × 1.8 + 32 f °F to k K: k = f + 459.67/1.8 k K to f °F: f = k × 1.8 − 459.67 There is also an exact conversion between Celsius and Fahrenheit scales making use of the correspondence −40 °F ≙ −40 °C. Again, f is the numeric value in degrees Fahrenheit, and c the numeric value in degrees Celsius: f °F to c °C: c = f + 40/1.8 − 40 c °C to f °F: f = (c + 40) × 1.8 − 40 When converting a temperature interval between the Fahrenheit and Celsius scales, only the ratio is used, without any constant (in this case, the interval has the same numeric value in kelvins as in degrees Celsius): f °F to c °C or k K: c = k = f/1.8 c °C or k K to f °F: f = c × 1.8 = k × 1.8 Fahrenheit proposed his temperature scale in 1724, basing it on two reference points of temperature. In his initial scale (which is not the final Fahrenheit scale), the zero point was determined by placing the thermometer in "a mixture of ice, water, and salis Armoniaci[note 1] [transl. ammonium chloride] or even sea salt".[11] This combination forms a eutectic system, which stabilizes its temperature automatically: 0 °F was defined to be that stable temperature. A second point, 96 degrees, was approximately the human body's temperature.[11] A third point, 32 degrees, was marked as being the temperature of ice and water "without the aforementioned salts".[11] According to a German story, Fahrenheit actually chose the lowest air temperature measured in his hometown Danzig (Gdańsk, Poland) in winter 1708–09 as 0 °F, and only later had the need to be able to make this value reproducible using brine.[12][failed verification] According to a letter Fahrenheit wrote to his friend Herman Boerhaave,[13] his scale was built on the work of Ole Rømer, whom he had met earlier. In Rømer scale, brine freezes at zero, water freezes and melts at 7.5 degrees, body temperature is 22.5, and water boils at 60 degrees. Fahrenheit multiplied each value by 4 in order to eliminate fractions and make the scale more fine-grained. He then re-calibrated his scale using the melting point of ice and normal human body temperature (which were at 30 and 90 degrees); he adjusted the scale so that the melting point of ice would be 32 degrees, and body temperature 96 degrees, so that 64 intervals would separate the two, allowing him to mark degree lines on his instruments by simply bisecting the interval 6 times (since 64 = 26).[14][15] Fahrenheit soon after observed that water boils at about 212 degrees using this scale.[16] The use of the freezing and boiling points of water as thermometer fixed reference points became popular following the work of Anders Celsius, and these fixed points were adopted by a committee of the Royal Society led by Henry Cavendish in 1776–77.[17][18] Under this system, the Fahrenheit scale is redefined slightly so that the freezing point of water was exactly 32 °F, and the boiling point was exactly 212 °F, or 180 degrees higher. It is for this reason that normal human body temperature is approximately 98.6 °F (oral temperature) on the revised scale (whereas it was 90° on Fahrenheit's multiplication of Rømer, and 96° on his original scale).[19] In the present-day Fahrenheit scale, 0 °F no longer corresponds to the eutectic temperature of ammonium chloride brine as described above. Instead, that eutectic is at approximately 4 °F on the final Fahrenheit scale.[note 2] The Rankine temperature scale was based upon the Fahrenheit temperature scale, with its zero representing absolute zero instead. Countries by usage: Fahrenheit (°F) Fahrenheit (°F) and Celsius (°C) Celsius (°C) The Fahrenheit scale was the primary temperature standard for climatic, industrial and medical purposes in Anglophone countries until the 1960s. In the late 1960s and 1970s, the Celsius scale replaced Fahrenheit in almost all of those countries—with the notable exception of the United States. Fahrenheit is used in the United States, its territories and associated states (all serviced by the U.S. National Weather Service), as well as the (British) Cayman Islands and Liberia for everyday applications. The Fahrenheit scale is in use in U.S. for all temperature measurements including weather forecasts, cooking, and food freezing temperatures, however for scientific research the scale is Celsius and Kelvin.[20] Early in the 20th century, Halsey and Dale suggested that reasons for resistance to use the centigrade (now Celsius) system in the U.S. included the larger size of each degree Celsius and the lower zero point in the Fahrenheit system; and claimed the Fahrenheit scale is more intuitive than Celsius for describing outdoor temperatures in temperate latitudes, with 100 °F being a hot summer day and 0 °F a cold winter day.[21] Canada has passed legislation favoring the International System of Units, while also maintaining legal definitions for traditional Canadian imperial units.[22] Canadian weather reports are conveyed using degrees Celsius with occasional reference to Fahrenheit especially for cross-border broadcasts. Fahrenheit is still used on virtually all Canadian ovens.[23] Thermometers, both digital and analog, sold in Canada usually employ both the Celsius and Fahrenheit scales.[24][25] [26] In the European Union, it is mandatory to use Kelvins or degrees Celsius when quoting temperature for "economic, public health, public safety and administrative" purposes, though degrees Fahrenheit may be used alongside degrees Celsius as a supplementary unit.[27] Most British people use Celsius.[28] However, the use of Fahrenheit still may appear at times alongside degrees Celsius in the print media with no standard convention for when the measurement is included. For example, The Times has an all-metric daily weather page but includes a Celsius-to-Fahrenheit conversion table.[29] Some UK tabloids have adopted a tendency of using Fahrenheit for mid to high temperatures. [30] It has been suggested that the rationale to keep using Fahrenheit was one of emphasis for high temperatures: "−6 °C" sounds colder than "21 °F", and "94 °F" sounds more sensational than "34 °C".[31] Unicode provides the Fahrenheit symbol at code point U+2109 ℉ DEGREE FAHRENHEIT. However, this is a compatibility character encoded for roundtrip compatibility with legacy encodings. The Unicode standard explicitly discourages the use of this character: "The sequence U+00B0 ° DEGREE SIGN + U+0046 F LATIN CAPITAL LETTER F is preferred over U+2109 ℉ DEGREE FAHRENHEIT, and those two sequences should be treated as identical for searching."[32] Energy portal Outline of metrology and measurement Comparison of temperature scales Degree of frost Metrication ^ "Sal Armoniac" was an impure form of ammonium chloride. The French chemist Nicolas Lémery (1645–1715) discussed it in his book Cours de Chymie (A Course of Chemistry, 1675), describing where it occurs naturally and how it can be prepared artificially. It occurs naturally in the deserts of northern Africa, where it forms from puddles of animal urine. It can be prepared artificially by boiling 5 parts of urine, 1 part of sea salt, and ½ part of chimney soot until the mixture has dried. The mixture is then heated in a sublimation pot until it sublimates; the sublimated crystals are sal Armoniac. See: Nicolas Lémery, Cours de chymie […], 7th ed. (Paris, France: Estienne Michallet, 1688), Chapitre XVII : du Sel Armoniac, pp. 338–339. English translation: Nicolas Lémery with James Keill, trans., A Course of Chymistry […], 3rd ed. (London, England: Walter Kettilby, 1698), Chap. XVII: of Sal Armoniack, p. 383, available on-line at Heinrich Heine University (Düsseldorf, Germany). ^ Eutectic temperature of ammonium chloride and water is listed as −15.9 °C (3.38 °F) and as −15.4 °C (4.28 °F) in (respectively) Peppin, S. S.; Huppert, H. E.; Worster, M. G. (2008). "Steady-state solidification of aqueous ammonium chloride" (PDF). J. Fluid Mech. 159. Cambridge University Press: 472 (table 1). Bibcode:2008JFM...599..465P. doi:10.1017/S0022112008000219. S2CID 30271164. Archived (PDF) from the original on 19 January 2010. Barman, N.; Nayak, A. K.; Chattopadhyay, H. (2021). "Solidification of a Binary Solution (NH4Cl + H2O) on an Inclined Cooling Plate: A Parametric Study" (PDF). Procedia Materials Science. 7: 456 (table 1). doi:10.1016/j.mspro.2014.07.288. Archived (PDF) from the original on 15 January 2019. ^ Balmer, Robert T. (2010). Modern Engineering Thermodynamics. Academic Press. p. 9. ISBN 978-0-12-374996-3. 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Retrieved from " Temperature degrees conversions of Fahrenheit (°F), Celsius (°C), Kelvin (K), Rankine (°R): Temperature conversions See also Celsius to Fahrenheit ► Fahrenheit is a unit of temperature. The freezing/melting point of water is about 32 °F at a pressure of 1 atmosphere. The symbol of Fahrenheit degrees is °F. Celsius Celsius or centigrade is a unit of temperature. The freezing/melting point of water is about zero degrees celsius (0 °C) at a pressure of 1 atmosphere. The boiling point of water is about one hundred degrees celsius (100 °C) at a pressure of 1 atmosphere. The exact values depend on the water composition (usually the amount of salt) and the air pressure. Seawater contains salt and the freezing point is reduced below 0 °C. When boiling water on a mountain above sea level the boiling point is reduced below 100 °C. The symbol of Celsius degrees is °C. How to convert Fahrenheit to Celsius 0 degrees Fahrenheit is equal to -17.77778 degrees Celsius: 0 °F = -17.77778 °C The temperature in degrees Celsius (°C) is equal to the temperature in degrees Fahrenheit (°F) minus 32, times 5/9: Celsius = (Fahrenheit - 32) × 5/9 or Celsius = (Fahrenheit - 32) / (9/5) or Celsius = (Fahrenheit - 32) / 1.8 Example #1 Convert 32 degrees Fahrenheit to degrees Celsius: Celsius = (32°F - 32) × 5/9 = 0 °C Example #2 Convert 68 degrees Fahrenheit to degrees Celsius: Celsius = (68°F - 32) × 5/9 = 20 °C Fahrenheit to Celsius conversion table Fahrenheit (°F) Celsius (°C) Description -459.67 °F -273.15 °C absolute zero temperature -50 °F -45.56 °C -40 °F -40.00 °C -30 °F -34.44 °C -20 °F -28.89 °C -10 °F -23.33 °C 0 °F -17.78 °C 10 °F -12.22 °C 20 °F -6.67 °C 30 °F -1.11 °C 32 °F 0 °C freezing point of water 40 °F 4.44 °C 50 °F 10.00 °C 60 °F 15.56 °C 70 °F 21.11 °C room temperature 80 °F 26.67 °C 90 °F 32.22 °C 98.6 °F 37 °C average body temperature 100 °F 37.78 °C 110 °F 43.33 °C 120 °F 48.89 °C 130 °F 54.44 °C 140 °F 60.00 °C 150 °F 65.56 °C 160 °F 71.11 °C 170 °F 76.67 °C 180 °F 82.22 °C 190 °F 87.78 °C 200 °F 93.33 °C 212