



# Distance from earth to sun to scale

the Sun as they are represented in this toilet paper model. o And worth sharing: astronomers measure distances in the solar system in "astronomical units" or AU. 1 AU = 93 million miles, the distance from the Sun to the Earth. o Talk about what a solar system model that demonstrates the relative average distances

Table 2a Solar System Scaled to 3-inch Sun Parameter Real Distance/Size Scaled Distance/Size -----  
Sun (diameter) 1,392,000 km 3 inches (tennis ball or small orange) Mercury (distance) 0.39 AU 10.4 feet  
Mercury (diameter) 4880 km 0.01 inches (grain of sand) Venus (distance) 0.72 AU 19.1 feet Venus (diameter)  
12112 km 0.03 inches ...

Download the Scale Distance spreadsheet (XLSX or CSV). Create a formula in your spreadsheet that will calculate the distance from the Sun to each planet (in centimeters) in your model. The formula should multiply the AU value by the number of centimeters you want each AU to represent, your scale value.

One AU is the distance from the Sun to Earth's orbit, which is about 93 million miles (150 million kilometers). When measured in astronomical units, the 886,000,000-mile (1,400,000,000-kilometer) distance from the Sun to Saturn's orbit, is a much more manageable 9.5 AU. So astronomical units are a great way to compress truly astronomical ...

The solar system extends for thousands of astronomical units away from the sun. Mercury, the closest planet to the sun, gets as near as 29 million miles (47 million km) in its elliptical orbit, while some objects in the Oort cloud, the solar system's icy shell, are thought to lie as far as 100,000 AU to 200,000 AU from the sun.

The average distance from the Earth to the Sun is approximately 150 million kilometers. That's a huge number, isn't it? To put it into perspective, if we were to travel at the speed of a jet plane, it would take us over 20 years to reach the Sun!

This is because the distance between Earth and the Sun is not fixed (it varies between 0.983 289 8912 and 1.016 710 3335 au) and, when Earth is closer to the Sun, the Sun's gravitational field is stronger and Earth is moving faster along its orbital path. As the metre is defined in terms of the second and the speed of light is constant for all ...

Calculate the scaled planet diameters and planet-sun distances for a solar system model. Enter scale or diameter or distance, select to show table and/or map below, select options, then press Calculate. Please enter scale or diameter or distance from sun. Orbits of objects beyond Neptune are highly eccentric ellipses, not circles. Map not shown.

The Sun is about 149 million km (93 million miles) from Earth. This is the average distance; since Earth's orbit is an ellipse, not a perfect circle, the Earth-Sun distance varies slightly throughout the year. In early January when the Earth is at perihelion (Earth's closest point to the Sun in each orbit), Earth comes within



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147.09 million km ...

An astronomical unit (AU) is exactly 149,597,870,700 meters (92,955,807 miles or 149,597,871 kilometers), according to the International Astronomical Union (IAU). This is roughly the average...

The average distance between the Earth and the Sun is about 93 million miles. (NASA) All of the planets, comets, and asteroids in the solar system orbit the Sun. The average distance between the Earth and the Sun is 92,955,807 miles (149,597,870 km). Most people just round it up to 93 million miles.

The online form presents, by default, the diameters and distances of planets scaled such that the distance Earth-Sun equals 1 metre. Their respective positions around the Sun are also calculated for the current date (mean heliocentric longitudes). To change the scale or to change the date, deploy the set parameters tab and define your solar system by setting the following parameters:

The Sun is about 100 times wider than the Earth and the Earth could fit into the Sun over one million times. It would take 500 years for the fastest person on Earth to run the distance from the ...

Since the Earth moves around the Sun, the distance differs, with Earth's closest point from the Sun - perihelion - reaching 147.5 million km / 91.3 million mi. When it comes to Earth's farthest point from the Sun - aphelion - it is around 152 million km / 94.5 million mi, a little over 1 AU away from the Sun.

The Sun could not harbor life as we know it because of its extreme temperatures and radiation. Yet life on Earth is only possible because of the Sun's light and energy. Size and Distance. Size and Distance. Our Sun is a medium-sized star with a ...

Decide in advance if students will calculate scale distance from the Sun to the planets, scale size of planets or both. Depending on student abilities, consider using astronomical units (au) for distances instead of kilometers or miles. ... Ask students to guess how far away Earth would be from the Sun in a scale model if Earth were 1 cm in ...

The distance between the Earth and the Sun is referred to as astronomical unit (au), which is also a unit for measuring other distances throughout the solar system. The au averages 149.6 million kilometers or 92.96 million miles. The distance between the Earth and the Sun is so great that the light from the Sun takes about eight minutes to hit ...

$$\cos E = \frac{\text{distance}(\text{Earth-Moon})}{\text{distance}(\text{Earth-Sun})}$$
 Since he had already computed the Earth-Moon distance from the duration of lunar eclipses, he could conclude on the Earth-Sun distance. His results were false, because of too loose measure of the angle, but his method was very accurate. See Wikipedia for more details.

"Seeing" the Earth, Moon, and Sun to Scale. The moon is about 1.3 light-seconds away (240,000



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miles). Here is a scale picture of the Earth-moon system, with the earth (actual diameter: 8,000 miles) represented by a circle just a little bigger than 1/8 inch: ... The terms light-seconds and light-minutes are used as units of distance along with ...

Astronomers use the distance between Earth and sun, which is 93 million miles, as a new unit of measure called the Astronomical Unit. It is defined to be exactly 1.00 for the Earth-Sun orbit distance, and we call this distance 1.00 AUs. Problem 1 - The table below gives the distance from the Sun of the eight planets in our solar system.

Astronomical unit, a unit of length effectively equal to the average, or mean, distance between Earth and the Sun, defined as 149,597,870.7 km (92,955,807.3 miles). ... a model that was independent of a particular scale. To establish the scale for all orbits and to determine the astronomical unit, all that was needed was an accurate measurement ...

And there is a good reason for this: you'll understand it when you view the image in its full size! This image shows the solar system to scale up to the planet Earth. The sizes of the planets themselves are not exactly to scale (they would be smaller compared to the Sun), but the Sun and the distance of the planets from the Sun are to scale.

Calculate the scaled planet diameters and planet-sun distances for a solar system model. Enter scale or diameter or distance, select to show table and/or map below, select options, then press Calculate. Examples: Scale 1 : 100000000 or Sun Diameter ...

For comparison the Earth's orbit is much more circular and its distance from the Sun varies by less than 2m in our scale model. Much smaller than the Earth, Mars comes in at just 2.7mm. Notice how in moving from the Earth to Mars we increased the size of the Solar System by over 50%.

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