

# Planet s distance from the sun

The order of the eight official solar system planets from the Sun, starting closest and moving outward is: Mercury. Venus. Earth. Mars. Jupiter. Saturn. Uranus. Neptune. The planets in order from the Sun. Image created using IAU / NASA ...

How far each planet is from the sun is a more complicated question than it appears. Each planet is in an elliptical orbit around the sun. This means that the orbits of the planets are oval-shaped, and so at different intervals, the planets will be closer or further from the sun. It can be hard to fully grasp the scale of the solar system.

Jupiter remains pretty close to our end zone on the 10.5-yard line. Our solar system's largest planet is an average distance of 484 million miles (778 million kilometers) from the Sun. That's 5.2 AU. Jupiter is the largest of the planets, spanning nearly 1.75 millimeters in diameter on our football field scale.

Mercury is the closest planet to the Sun. It lies at an average distance of about 58 million kilometers (36 million miles). In terms of the Earth-Sun distance, it is 0.4 AU. Measuring around 4,880 km (3,032 mi) across, Mercury is the smallest of all the eight planets.

The distance among each of the eight planets in our Solar System will alter depending on where each planet is in its orbit revolution around the Sun. Depending on the time of year the distance can also differ significantly. The main reason for the planets to vary their distance is due to elliptical orbits.

For example, stating that the planet Jupiter is 5.2 AU (5.2 Earth distances) from the Sun and that Pluto is nearly 40 AU gives ready comparisons of the distances of all three bodies. In principle, the easiest way to determine the value of the astronomical unit would have been to measure the Earth-Sun distance directly by means of the parallax ...

Distance from the Sun to planets in astronomical units (au): Planet Distance from Sun (au) Mercury 0.39 Venus 0.72 Earth 1 Mars 1.52 Jupiter 5.2 Saturn 9.54 Uranus 19.2 Neptune 30.06 Diameter of planets and their distance from the Sun in kilometers (km):

The planet's closest approach to the sun is called perihelion and its farthest distance from the sun is called aphelion. Figure 7.2 (a) An ellipse is a closed curve such that the sum of the distances from a point on the curve to the two foci (  $f_1$  and  $f_2$  ) is constant.

In the time it takes the Earth to complete one orbit, the planets closer to the Sun (Mercury and Venus) orbit at least once. The more distant planets (Mars, Jupiter, Saturn, Uranus and Neptune) which move slower and have a greater distance to travel, complete just a fraction of their orbits in this time.

How long a planet takes to go around the Sun (its period,  $P$ ) is related to the planet's mean distance from the



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Sun (d). That is, the square of the period,  $P^2$ , divided by the cube of the mean distance,  $d^3$ , is equal to a constant. For every planet, no matter its period or distance,  $P^2/(d^3)$  is the same number.

With a radius of 3,959 miles (6,371 kilometers), Earth is the biggest of the terrestrial planets and the fifth largest planet overall. From an average distance of 93 million miles (150 million kilometers), Earth is exactly one astronomical unit away from the Sun because one astronomical unit (abbreviated as AU), is the distance from the Sun to ...

The major axis of a planet's orbit is the distance across the long axis of the elliptical orbit. The semimajor axis is half of that. ... For Mercury, the closest planet to the Sun, its orbital distance,  $a$ , is equal to 0.387 astronomical unit, and its period,  $T$ , is 88 days, or 0.241 year. For that planet,  $a^3/T^2$  is equal to 0.058/0.058, or 1 ...

Mercury is the first planet in our solar system. It is the closest planet to the Sun, located at an average distance of 36 million miles (58 million kilometres) from our star cause this small planet is so close to the Sun's harmful solar winds, it ...

If the Sun-Neptune distance is scaled to 100 metres (330 ft), then the Sun would be about 3 cm (1.2 in) in diameter (roughly two-thirds the diameter of a golf ball), the giant planets would be all smaller than about 3 mm (0.12 in), and Earth's diameter along with that of the other terrestrial planets would be smaller than a flea (0.3 mm or 0. ...

The planets that orbit the sun are (in order from the sun): Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto (a dwarf planet or plutoid). ... Planet (or Dwarf Planet) Distance from the Sun (Astronomical Units/miles/km) Period of Revolution Around the Sun (1 planetary year) Period of Rotation (1 planetary day) Mass

As an example, the distance between the planet Mercury and Earth can range from 77 million km at the closest point, to as far as 222 million km at the farthest. There is a huge amount of different in the distances between the planets depending on their position on their orbit path. ... 1 AU is the distance from the Sun to Earth, which is ...

Mars - the fourth planet from the Sun - is a dusty, cold, desert world with a very thin atmosphere. This dynamic planet has seasons, polar ice caps, extinct volcanoes, canyons and weather. ... One astronomical unit (abbreviated as AU), is the distance from the Sun to Earth. From this distance, it takes sunlight 13 minutes to travel from the ...

There are lots of tricks for remembering the order of the planets. This illustration shows them in order from the sun. WP/CC BY-SA 3.0/Wikipedia. Over the past 60 years, humans have begun to explore our solar system in earnest. From the first launches in the late 1950s until today, we've sent probes, orbiters, landers, and even rovers (like NASA's Perseverance Rover ...

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Venus orbits the Sun from an average distance of 67 million miles (108 million kilometers), or 0.72 astronomical units. One astronomical unit (abbreviated as AU), is the distance from the Sun to Earth. ... This weak magnetic field is created by the interaction of the Sun's magnetic field and the planet's outer atmosphere. Ultraviolet light from ...

Mercury, the closest planet to the sun, is about 0.39 AU from our star, while Neptune, the farthest planet from the sun, is 30.06 AU away from it. ... "Planet Distance Chart," accessed Oct. 19

Neptune is the farthest planet from the Sun in our solar system. Neptune is the windiest planet in our solar system, with wind speeds reaching up to 1,300 miles per hour. Neptune a huge spinning storm known as "The Great Dark Spot". It has the strongest winds ever recorded on any planet in the solar system.

We define a planet's orbital period, ((P)), as the time it takes a planet to travel once around the Sun. Also, recall that a planet's semimajor axis,  $a$ , is equal to its average distance from the Sun. The relationship, now known as Kepler's third law, says that a planet's orbital period squared is proportional to the semimajor axis of ...

**DISTANCE FROM THE SUN.** Click on a planet name for information about the distance of the planets from the Sun. See how far they are away from the Sun and each other. On smaller devices view this page in landscape mode . Key. Numbers in million of kilometres; Semi-major axis: The Average Orbit; Aphelion: The furthest part of the orbit from the Sun

The planet Earth is 93 million miles away from the sun, and with a diameter of 7,926 miles, it is the fifth largest planet in the solar system. As far as we know, it is the only planet with life, and about 70 percent of its surface is covered in water. Earth revolves around the sun once every 365 days and rotates on its axis in 24 hours.

The Hill sphere (gravitational sphere of influence) of the Earth is about 1,500,000 kilometers (0.01 AU) in radius, or approximately four times the average distance to the Moon. [12] [nb 2] This is the maximal distance at which the Earth's ...

Distances between the planets, and especially between the stars, can become so big when expressed in miles and kilometers that they're unwieldy. ... 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 ...

5 days ago&#0183; Located at the centre of the solar system and influencing the motion of all the other bodies through its gravitational force is the Sun, which in itself contains more than 99 percent of the mass of the system. The planets, in order of their distance outward from the Sun, are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Four planets--Jupiter through ...

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The planets' distance from the Sun varies because all the planets orbit the Sun on different elliptical paths. The top row of planets shows the distance in kilometers or miles. The second row of planets dotted on a line illustrates their relative distance from the Sun and each other.

Size and Distance. Our Sun is a medium-sized star with a radius of about 435,000 miles (700,000 kilometers). Many stars are much larger - but the Sun is far more massive than our home planet: it would take more than 330,000 Earths to match the mass of the Sun, and it would take 1.3 million Earths to fill the Sun's volume. ... Its spin has a ...

22 rows; The Astronomical units (AU) column is the average distance between Earth and the Sun and is the most common way for scientists to measure distance in our Solar ...

Kepler's third law implies that the greater the distance of a planet from the Sun, the longer the period of that planet's orbit around the Sun. Thus, Mercury -- the planet closest to the Sun -- makes an orbit every 88 days. By ...

Planets in order of distance from the Sun: Planets In Order Of Mass: 1. Mercury The planet Mercury. Image source: NASA The first planet in our solar system is Mercury. It is slightly smaller than Earth's moon and is extremely hot. As in 850 Fahrenheit or so.

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