



Length of a Day on Each Planet

Why in News

- Recently, the research was undertaken to calculate the **accurate length of a day on Venus and Saturn which has been changing since 1963.**
 - **Venus:**
 - The recent observation of the **Magellan spacecraft's observations (1991)** concluded that the **rotation period for Venus** has an uncertainty of about 9 seconds.
 - **Saturn:**
 - The recent, the **Cassini spacecraft** showed that there is an uncertainty of **6 minutes** with a rotation period of Saturn.

The Solar System

- The Solar System consists of the Sun and eight **planets.**
 - It also consists of bodies such as **comets, asteroids, and meteors.**

Planets vs Dwarf Planets

- The definition of a planet was adopted by the **International Astronomical Union** in 2006. A planet must:
 - Orbit a star (in our system, it is the Sun).
 - Be big enough to have enough gravity to force it into a spherical shape.
 - Be big enough that its gravity cleared away any other objects of a similar size near its orbit around the Sun.
- On the other hand, **dwarf planet** is a celestial body orbiting a star that is massive enough to be rounded by its own gravity but has **no clear orbit (Gravitationally not dominant in its orbit).**



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Planets	Facts
<p>Mercury</p>	<ul style="list-style-type: none"> ▪ It is the nearest to the Sun and also the smallest planet in our solar system. ▪ It has no satellite of its own. ▪ It takes 1408 hours to complete a rotation.
<p>Venus</p>	<ul style="list-style-type: none"> ▪ It is called morning or an evening star, although it is not a star. ▪ Sometimes it is called as Earth's twin. ▪ Venus has no moon or satellite of its own. ▪ It rotates from east to west while the Earth rotates from west to east. ▪ It takes 5,832 hours to complete a rotation.
<p>Earth</p>	<ul style="list-style-type: none"> ▪ The Earth is the only planet in the solar system on which life is known to exist. ▪ The axis of rotation of the Earth is 23.5 degrees relative to the orbital plane - the plane of Earth's orbit around the sun. The tilt is responsible for the change of seasons on the Earth. ▪ The Earth has only one moon. ▪ The Earth takes 24 hours to complete a rotation.
<p>Mars</p>	<ul style="list-style-type: none"> ▪ It appears slightly reddish and, therefore, it is also called the red planet. ▪ Mars has two small natural satellites. ▪ It takes 25 hours to complete a rotation.
<p>Jupiter</p>	<ul style="list-style-type: none"> ▪ Jupiter is the largest planet of the solar system. ▪ Jupiter has 53 named satellites and another 26 awaiting official names. ▪ It also has faint rings around it. ▪ It takes only 10 hours to complete a rotation.
<p>Saturn</p>	<ul style="list-style-type: none"> ▪ The Saturn is yellowish in colour. ▪ It has an icy ring around it. ▪ It has more than 60 known moons.

	<ul style="list-style-type: none"> ▪ It takes 11 hours to complete a rotation (second-shortest day in the solar system).
Uranus	<ul style="list-style-type: none"> ▪ Uranus also rotates from east to west (like Venus). ▪ It has a highly tilted rotational axis. ▪ It takes 17 hours to complete a rotation.
Neptune	<ul style="list-style-type: none"> ▪ It is the eighth and most distant planet in our solar system. ▪ The Neptune is dark, cold and has a presence of supersonic winds. ▪ It takes 16 hours to complete a rotation.

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