



# 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).**



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

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

[Source: IE](#)

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