

Challenging Solar System Facts

Solar System Basics · Answer Key · 18 Questions

1. Which planet is known to have a retrograde rotation, meaning it spins in the opposite direction to most other planets?

- A) Mars
- B) Jupiter
- C) Venus**
- D) Saturn

2. What is the primary component of the Sun, making up approximately 74% of its mass?

- A) Helium
- B) Oxygen
- C) Hydrogen**
- D) Iron

3. The Kuiper Belt, a region beyond Neptune, is home to many icy bodies, including which dwarf planet that was once considered the ninth planet?

- A) Ceres
- B) Eris
- C) Makemake
- D) Pluto**

4. Which of Jupiter's moons is the most volcanically active body in the solar system?

- A) Europa
- B) Ganymede
- C) Io**
- D) Callisto

5. What is the name of the region beyond the orbit of Neptune that is a vast, disc-like structure containing numerous icy bodies?

- A) Oort Cloud
- B) Asteroid Belt
- C) Heliopause
- D) Kuiper Belt**

6. What phenomenon causes the distinctive rings of Saturn?

- A) Solid ice formations
- B) Gravitational pull from moons**
- C) Molten rock debris
- D) Frozen atmospheric gases

7. Which terrestrial planet has the highest average surface temperature in our solar system?

A) Mercury

B) Venus

C) Earth

D) Mars

8. The Great Red Spot on Jupiter is a giant, persistent storm that has been observed for centuries. What is its approximate size relative to Earth?

A) About the size of Earth

B) Twice the diameter of Earth

C) Half the diameter of Earth

D) Three times the diameter of Earth

9. What is the most abundant gas in Earth's atmosphere, making up about 78%?

A) Oxygen

B) Carbon Dioxide

C) Nitrogen

D) Argon

10. Which planet is known for its extreme axial tilt, causing it to orbit the Sun on its side?

A) Neptune

B) Uranus

C) Saturn

D) Mars

11. What is the name of the only moon in our solar system known to have a substantial atmosphere?

A) Europa

B) Titan

C) Io

D) Ganymede

12. The asteroid belt is located between the orbits of which two planets?

A) Earth and Mars

B) Mars and Jupiter

C) Jupiter and Saturn

D) Saturn and Uranus

13. What is the primary force that holds the planets in orbit around the Sun?

- A) Electromagnetism
- B) Nuclear fusion
- C) Gravity**
- D) Centrifugal force

14. Which of the following is NOT a dwarf planet in our solar system?

- A) Ceres
- B) Eris
- C) Pluto
- D) Titan**

15. What is the largest moon in the solar system, larger even than the planet Mercury?

- A) Titan
- B) Callisto
- C) Io
- D) Ganymede**

16. What is the most prominent feature of Mars's surface, visible even from Earth?

- A) Vast oceans
- B) Giant impact craters
- C) Polar ice caps**
- D) Extensive volcanic ranges

17. What is the approximate age of the solar system, in billions of years?

- A) 1
- B) 4.6**
- C) 10
- D) 13.8

18. Which planet is known for its prominent, easily visible rings, composed mainly of ice particles?

- A) Jupiter
- B) Uranus
- C) Neptune
- D) Saturn**