

Cosmic Logical Reasoning

Astronomy · Answer Key · 25 Questions

1. If Mercury is the closest planet to the Sun, and Venus is the second, which planet is logically the third from the Sun?

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

2. If a gas giant is defined as a planet composed mostly of hydrogen and helium, which of these is logically a gas giant?

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

3. If the inner planets are rocky and the outer planets are gaseous, which planet does not belong in the 'rocky' category?

- A) Mars
- B) Venus
- C) Neptune**
- D) Earth

4. If a light-year is the distance light travels in one year, which of these is the closest star to the Sun?

- A) Proxima Centauri**
- B) Sirius
- C) Vega
- D) Betelgeuse

5. If a planet must clear its orbit to be classified as a planet, why is Pluto classified as a dwarf planet?

- A) It is too cold
- B) It has not cleared its neighborhood**
- C) It is made of gas
- D) It has no moon

6. If Earth rotates once every 24 hours, approximately how long does it take for the Moon to complete one rotation on its axis?

- A) 24 hours
- B) 12 hours
- C) 27.3 days**
- D) 365 days

7. If all terrestrial planets have solid surfaces, which planet is NOT a terrestrial planet?

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

8. If the asteroid belt is located between two planets, which are they?

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

9. If Olympus Mons is the tallest volcano in the solar system, on which planet is it located?

- A) Earth
- B) Venus
- C) Mars**
- D) Mercury

10. If Venus is the hottest planet in the solar system due to its atmosphere, what is the primary component of that atmosphere?

- A) Oxygen
- B) Carbon Dioxide**
- C) Nitrogen
- D) Hydrogen

11. If moons are natural satellites, which planet has the largest moon in the solar system, Ganymede?

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

12. If the Sun accounts for the vast majority of the solar system's mass, what percentage does it represent?

- A) 50%
- B) 75%
- C) 99.8%**
- D) 90%

13. If Neptune is the most distant major planet, which planet is the second most distant?

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

14. If a planet's day is defined by its rotation, which planet has the longest day, taking 243 Earth days to rotate once?

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

15. If Earth is the only planet known to support life, which chemical element is considered essential for 'life as we know it'?

- A) Gold
- B) Carbon**
- C) Iron
- D) Helium

16. If ring systems are common among gas giants, which planet has the most extensive and visible ring system?

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

17. If gravity keeps planets in orbit, what keeps the solar system rotating around the center of the Milky Way?

- A) A massive black hole**
- B) Dark matter
- C) A nearby star
- D) Magnetism

18. If Phobos and Deimos are moons of a specific planet, which planet are they orbiting?

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

19. If the Great Red Spot is a persistent high-pressure storm, on which planet is it found?

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

20. If the temperature of the Sun's surface is about 5,500 degrees Celsius, what is the layer called?

- A) Corona
- B) Photosphere**
- C) Core
- D) Chromosphere

21. If Earth's axis is tilted, what is the approximate degree of this tilt?

- A) 15 degrees
- B) 23.5 degrees**
- C) 45 degrees
- D) 90 degrees

22. If Titan is a major moon with a thick atmosphere, which planet does it orbit?

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

23. If ice giants are a subset of gas giants, which two planets are classified as ice giants?

- A) Jupiter and Saturn
- B) Uranus and Neptune**
- C) Mars and Earth
- D) Mercury and Venus

24. If the Milky Way is a galaxy, what type of galaxy is it classified as?

- A) Elliptical
- B) Irregular
- C) Spiral**
- D) Lenticular

25. If orbital periods increase with distance from the Sun, which planet takes the longest to orbit the Sun?

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