Name:_____ Date:_____

1. The pull of gravity on Earth is a direct result of the

A. mass of Earth.

B. magnetic field of Earth.

C. rotation of Earth on its axis.

D. weight of Earth's atmosphere.

2. Which of the following lists Earth, Jupiter, the Moon, and the Sun in order from **largest** to **smallest**?

A. Jupiter, Earth, Sun, Moon

B. Sun, Jupiter, Earth, Moon

C. Sun, Jupiter, Moon, Earth

D. Jupiter, Sun, Earth, Moon

3. How would the measurable properties of a golf ball change if it were moved from Earth to the Moon?

A. It would have the same mass, but a different weight.

B. It would have the same weight, but a different mass.

C. It would have the same density, but a different mass.

D. It would have the same mass, but a different density.

4. The Moon orbits Earth at a speed of approximately one kilometer per second. The Moon is kept in orbit by which of the following?

A. gravity

B. lunar phases

C. magnetism

D. ocean tides

5. Venus has the highest surface temperature of all the planets in our solar system. Which is the **best** explanation for this?

A. Venus rotates on its axis very slowly.
B. Venus is very close to the Sun.
C. Venus revolves around the Sun relatively quickly.
D. Venus's atmosphere has thick clouds and carbon dioxide.

6. Which event in the life cycle of a star causes it to begin to glow?

A. The particles making up the star repel each other.
B. The temperature of the star mass increases.
C. The matter making up the star condenses.
D. The neutrons in the star begin to spin.

7. Artificial satellites are grouped into all of the following categories **except**

A. commercial.
B. meteor.
C. scientific.
D. secret military.

8. An astronomer observes a neutron star that has formed after a supernova. It is spinning rapidly and emitting radio waves. This star is a

A. supergiant.
B. black hole.
C. nova.
D. pulsar.

9. Astronomers usually measure the distance from Earth to the Moon in

A. meters.
B. kilometers.
C. light-years.
D. fathoms.

10. A characteristic of gaseous planets is that they have

A. no density.
B. a density greater than Earth's.
C. a density the same as Earth's.
D. a density less than Earth's.

11. The asteroid belt is located between

A. the Sun and Earth.
B. Mars and Jupiter.
C. Neptune and Pluto.
D. Saturn and Uranus.

12. The reason that a student does not feel the gravitational pull of the Sun is because

A. the Sun has no gravitational pull.
B. the mass of the Sun is very small.
C. the Sun is very far away.
D. Earth is so much smaller than the Sun.

---

13. Which planet is closest to the Sun?

A. Jupiter
B. Mars
C. Venus
D. Mercury

---

14. Which planet do scientists think once had surface water or flowing rivers?

A. Mercury
B. Venus
C. Mars
D. Jupiter

---

15. Venus is completely enveloped in clouds that hide its surface from view on Earth. Which statement is also true about these clouds?

A. They keep the surface cool.
B. They produce sulfuric acid rain.
C. They are mostly made of water.
D. They are caused by volcanoes.

---

16. A comet is largely made up of

A. iron and nickel.
B. rock.
C. petroleum.
D. water and ice.

---

17. We can be sure that the Milky Way galaxy we live in is a spiral galaxy rather than an elliptical galaxy because

A. it has curved arms.
B. it does not show any rotation.
C. its stars are all about the same age.
D. new stars are no longer forming.

---

18. When a star like the Sun runs out of hydrogen in its center, it evolves into a

A. red giant.
B. blue straggler.
C. supernova.
D. yellow dwarf.

---

19. How does the gravity on the Moon compare to the gravity on Earth?

A. Gravity is the same wherever you are.
B. There is less gravity on the Moon.
C. There is more gravity on the Moon.
D. Gravity depends on each person.

---

20. Why does the Moon orbit Earth instead of the Sun?

A. Gravity depends on distance and the Moon is closer to Earth.
B. Only large objects orbit around the Sun and the Moon is too small.
C. The Moon used to be part of Earth so it must orbit Earth.
D. The Moon is moving too fast and cannot change its orbit.

---

21. The Sun's gravity holds each planet in its orbit. Pluto is farther away from the Sun than Earth is. How does the effect of the Sun's gravity on Pluto compare with the effect of the Sun's gravity on Earth?

A. The Sun has the same gravitational pull on all planets that are in orbit.
B. The Sun has more gravitational pull on Pluto because it is smaller.
C. The Sun has less gravitational pull on Earth because it is closer.
D. The Sun has less gravitational pull on Pluto because it is farther away.

---

22. Objects in an orbiting space shuttle float because

A. the space shuttle slows down when it reaches orbit.
B. Earth's gravity has less effect on objects as they get farther away from Earth.
C. the mass of the object is less in space.
D. the space shuttle's engines cause too much vibration for objects to remain still.

---

23. Earth is made of solid materials. Jupiter, Saturn, Uranus, and Neptune are all made of gas. Which is true about the density of these planets?

A. They are more dense than Earth.
B. They have no density.
C. They are less dense than Earth.
D. They have the same density as Earth.

---

24. The asteroid belt can be found between

A. Earth and the Sun.
B. Earth and the Moon.
C. Neptune and Pluto.
D. Mars and Jupiter.

---

25. The dark, lava-covered lowlands of the Moon are called

A. mountains.
B. volcanoes.
C. valleys.
D. maria.

---

26. A hurricane-type cloud known as the Great Red Spot can be found on which planet?

A. Saturn
B. Mars
C. Uranus
D. Jupiter

---

27. The atmosphere of Venus consists of thick yellow clouds formed mostly from

A. helium.
B. sulfur.
C. hydrogen.
D. carbon.

---

28. Which accounts for the fact that a compass can be used to find north on Earth?

A. Earth has a magnetic field.
B. Earth has only one moon.
C. Most of Earth is covered by water.
D. Earth's temperature is not constant.

---

29. *Use the chart below to answer this question.*

Planet	Average distance from the Sun	Orbital speed
Mercury	58 million km	47.8 km/second
Venus	108 million km	33.9 km/second
Earth	150 million km	29.7 km/second
Mars	228 million km	24.1 km/second
Jupiter	779 million km	13.7 km/second
Saturn	1,430 million km	9.6 km/second
Uranus	2,900 million km	6.8 km/second
Neptune	4,500 million km	5.5 km/second
Pluto	5,950 million km	4.8 km/second

The chart shows the average distance of each planet from the Sun and the speed each planet travels in its orbit. Which conclusion should be drawn from this chart?

A. The planets closer to the Sun travel around the Sun faster.
B. The planets closer to the Sun absorb the Sun's energy and therefore move faster.
C. The outer planets move slower because they are larger.
D. The outer planets move slower because they have many moons.

---

30. What characteristics do scientists measure to determine the temperature and composition of stars?

A. the positions of the stars in the galaxy
B. the light radiated from the stars
C. the proximity of the stars to each other
D. the speed at which stars are moving

---

31. Which statement **best** explains why there is no atmosphere on the Moon?

A. The temperature of the Moon varies too much to develop an atmosphere.
B. The Moon does not have enough gravity to hold an atmosphere.
C. The Moon revolves too quickly to keep an atmosphere.
D. The density of the Moon is too great to allow an atmosphere.

32. *Use the table below to answer this question.*

Planet	Average distance from Sun (millions of km)	Period of revolution (Earth time)	Period of rotation (Earth time)
Mercury	58	88 days	59 days
Venus	108	225 days	243 days
Earth	149	365 days	24 hours
Mars	228	687 days	25 hours
Jupiter	778	12 years	10 hours
Saturn	1,427	29 years	10 hours
Uranus	2,871	84 years	18 hours
Neptune	4,497	165 years	19 hours
Pluto	5,914	249 years	6 days

This table shows data for major characteristics of the nine planets in the solar system. (One revolution is the length of time required for a planet to make one complete trip around the Sun; one rotation is the length of time required for a planet to make one complete turn on its axis.)

Which of the following planets has the shortest day measured in Earth time?

A. Pluto
B. Earth
C. Jupiter
D. Mercury

---

33. Life on Earth is protected from the Sun's ultraviolet radiation by

A. the cloud cover.
B. dust particles.
C. water vapor.
D. the ozone layer.

---

34. Footprints made by astronauts on the Moon many years ago are probably still there because

A. the heavy astronauts left very deep footprints in the Moon's dust.
B. the dust on the Moon hardened into stone.
C. time passes much more slowly on the Moon.
D. the Moon has no weather.

---

35. An object in the solar system has many wide, flat craters. What must be true about the object?

A. It is an asteroid.
B. It was originally formed with craters.
C. It has been hit by other objects from space.
D. It is a planet.

---

36. The force that keeps a communications satellite in orbit around Earth is

A. gravity.
B. friction.
C. magnetism.
D. electricity.

---

37. Which planet is characterized by thick cloud cover, greenhouse effect, vast plains, and high mountains?

A. Uranus
B. Saturn
C. Mercury
D. Venus

---

38. Marty learned that a planet's orbital velocity is related to its distance from the Sun. He noted that orbital velocities range from 4.7 km/sec (Pluto) to 47.8 km/sec (Mercury). Which planet is likely to have an orbital velocity of 5.4 km/sec?

A. Venus
B. Earth
C. Mars
D. Neptune

---

39. Which planet is characterized by polar ice caps, a pink sky, a rust-colored surface, large volcanoes, and surface channels?

A. Uranus
B. Pluto
C. Mars
D. Saturn

---

40. Which planet has a great red spot and many moons?

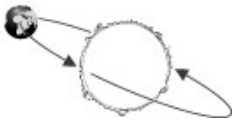
A. Neptune
B. Jupiter
C. Mars
D. Mercury

---

41. Which picture demonstrates rotation?

A. 

B. 

C. 

D. 

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42. The force that causes rain to fall to Earth is

A. wind.
B. solar heat.
C. gravity.
D. electromagnetism.

---

43. The ozone layer in Earth's upper atmosphere is important to living organisms because it

A. absorbs harmful ultraviolet radiation from the Sun.
B. breaks down harmful pollutants into normal atmospheric gases.
C. supplies the oxygen living organisms require to carry on respiration.
D. traps heat close to Earth's surface to maintain temperatures necessary for life.