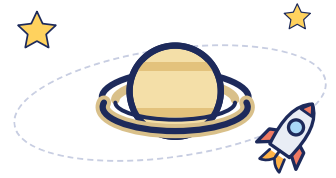


Space Quiz



Mission Control

Adults & trivia night · ages 15+

SCORE

____ / 30

Name _____ Team _____ Date _____

30 questions · 30 points · about 40 minutes

1

The Solar System

10 POINTS

Circle the letter of the correct answer. One point each.

- ① Which planet has a day (one full spin) that is longer than its year?

☐ (A) Mercury
 ☐ (B) Venus
 ☐ (C) Mars
 ☐ (D) Neptune
- ② Which planet is less dense than water, so it would float in a big enough bathtub?

☐ (A) Jupiter
 ☐ (B) Neptune
 ☐ (C) Earth
 ☐ (D) Saturn
- ③ About what share of the solar system's mass is the Sun?

☐ (A) 99.8%
 ☐ (B) 75%
 ☐ (C) 90%
 ☐ (D) 50%
- ④ Olympus Mons, the tallest volcano in the solar system, is on which planet?

☐ (A) Earth
 ☐ (B) Venus
 ☐ (C) Mars
 ☐ (D) Mercury
- ⑤ Which planet spins tilted on its side, like a ball rolling along its orbit?

☐ (A) Saturn
 ☐ (B) Neptune
 ☐ (C) Jupiter
 ☐ (D) Uranus
- ⑥ About how long does sunlight take to reach Earth?

☐ (A) 8 seconds
 ☐ (B) 8 minutes
 ☐ (C) 8 hours
 ☐ (D) 8 days
- ⑦ Which moon of Saturn has a thick atmosphere and lakes of liquid methane?

☐ (A) Titan
 ☐ (B) Enceladus
 ☐ (C) Triton
 ☐ (D) Io
- ⑧ Which planet has the shortest day, spinning once in under 10 hours?

☐ (A) Earth
 ☐ (B) Saturn
 ☐ (C) Jupiter
 ☐ (D) Mercury
- ⑨ Jupiter's Great Red Spot is a giant what?

☐ (A) Volcano
 ☐ (B) Crater
 ☐ (C) Storm
 ☐ (D) Ocean
- ⑩ We always see the same side of the Moon because it

☐ (A) Rotates once per orbit
 ☐ (B) Does not rotate at all
 ☐ (C) Is held still by the Sun
 ☐ (D) Is flat like a coin

2

Stars, Galaxies & the Universe

10 POINTS

Circle the letter of the correct answer. One point each.

- 11 Which single star is nearest to the Sun?
(A) Sirius (B) Alpha Centauri A (C) Proxima Centauri (D) Betelgeuse
- 12 Which star looks brightest in Earth's night sky?
(A) Polaris (B) Betelgeuse (C) Vega (D) Sirius
- 13 What is the nearest large spiral galaxy to our Milky Way?
(A) Andromeda (B) Whirlpool (C) Sombrero (D) Pinwheel
- 14 Which shape best describes our Milky Way galaxy?
(A) Elliptical (B) Irregular (C) Barred spiral (D) Ring
- 15 A sugar-cube-sized scoop of neutron star would weigh about
(A) 1 billion tons (B) 1 ton (C) 1 million tons (D) 1 kilogram
- 16 What is the point of no return around a black hole called?
(A) Singularity (B) Event horizon (C) Accretion disk (D) Photosphere
- 17 A rapidly spinning neutron star that sweeps beams of radiation past Earth is called a
(A) Quasar (B) Nova (C) Red giant (D) Pulsar
- 18 About what share of the universe's total mass and energy is ordinary matter?
(A) 50% (B) 27% (C) 5% (D) 95%
- 19 About how old is the universe?
(A) 4.6 billion years (B) 13.8 billion years (C) 138 billion years (D) 1 billion years
- 20 Stars twinkle mainly because of
(A) Pulsing inside the star (B) Earth's atmosphere bending starlight
(C) Dust between the stars (D) Earth's rotation

3

Space Exploration

10 POINTS

Circle the letter of the correct answer. One point each.

- 21 Which country launched Sputnik 1, the first artificial satellite, in 1957?
(A) United States (B) Soviet Union (C) China (D) Germany
- 22 Who became the first human in space, in 1961?
(A) Alan Shepard (B) Neil Armstrong (C) John Glenn (D) Yuri Gagarin

- 23 Who was the first woman in space, in 1963?
- (A) Sally Ride (B) Valentina Tereshkova
(C) Svetlana Savitskaya (D) Mae Jemison
- 24 Which Apollo mission first landed people on the Moon?
- (A) Apollo 13 (B) Apollo 8 (C) Apollo 11 (D) Apollo 17
- 25 Which Apollo 11 astronaut orbited the Moon alone while his two crewmates landed?
- (A) Michael Collins (B) Buzz Aldrin (C) Jim Lovell (D) Pete Conrad
- 26 What was Laika, who orbited Earth aboard Sputnik 2 in 1957?
- (A) A rabbit (B) A chimpanzee (C) A dog (D) A cat
- 27 Which Moon mission was cut short by an onboard explosion, yet its crew returned safely?
- (A) Apollo 13 (B) Apollo 1 (C) Apollo 9 (D) Apollo 11
- 28 Who became the first American woman in space, in 1983?
- (A) Mae Jemison (B) Christa McAuliffe (C) Judith Resnik (D) Sally Ride
- 29 Hubble's first images in 1990 were blurry. What was wrong?
- (A) The lens cap was stuck (B) Its primary mirror had the wrong shape
(C) Its solar panels shaded the camera (D) Its camera was aimed wrong
- 30 Launched in 1977, each Voyager spacecraft carries a golden what, meant for any alien finders?
- (A) Compass (B) Camera (C) Statue (D) Phonograph record



Tiebreaker

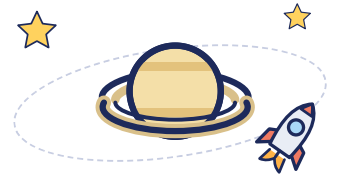
Closest answer wins.

TIEBREAKER

What is the average distance from Earth to the Moon, in kilometers?

Your answer _____

Answer Key



Mission Control

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QUICK CHECK

1 B	2 D	3 A	4 C	5 D	6 B
7 A	8 C	9 C	10 A	11 C	12 D
13 A	14 C	15 A	16 B	17 D	18 C
19 B	20 B	21 B	22 D	23 B	24 C
25 A	26 C	27 A	28 D	29 B	30 D

Round 1 · The Solar System

10 POINTS

- Which planet has a day (one full spin) that is longer than its year?
B · Venus
Venus spins once in about 243 Earth days but circles the Sun in about 225.
- Which planet is less dense than water, so it would float in a big enough bathtub?
D · Saturn
Saturn is the only planet in our solar system with an average density less than water.
- About what share of the solar system's mass is the Sun?
A · 99.8%
The Sun holds 99.8% of the solar system's mass. Everything else combined is a rounding error.
- Olympus Mons, the tallest volcano in the solar system, is on which planet?
C · Mars
Olympus Mons on Mars is the tallest volcano known in the solar system, far taller than Mount Everest.
- Which planet spins tilted on its side, like a ball rolling along its orbit?
D · Uranus
Uranus appears to spin sideways, rolling along its orbit instead of spinning upright like most planets.
- About how long does sunlight take to reach Earth?
B · 8 minutes
The Sun is about 8 light-minutes from Earth, so sunlight takes about 8 minutes to arrive.
- Which moon of Saturn has a thick atmosphere and lakes of liquid methane?
A · Titan
Titan has a thick atmosphere, plus rivers, lakes and seas of liquid methane and ethane.
- Which planet has the shortest day, spinning once in under 10 hours?
C · Jupiter
Jupiter has the shortest day in the solar system, about 9.9 hours.
- Jupiter's Great Red Spot is a giant what?
C · Storm
The Great Red Spot is a long-lived storm in Jupiter's atmosphere.
- We always see the same side of the Moon because it
A · Rotates once per orbit
The Moon is tidally locked: it spins exactly once per orbit, so one side always faces Earth.

Round 2 · Stars, Galaxies & the Universe

10 POINTS

11 Which single star is nearest to the Sun?

C · Proxima Centauri

Proxima Centauri, about 4.25 light-years away, is part of the Alpha Centauri system but slightly closer than stars A and B.

12 Which star looks brightest in Earth's night sky?

D · Sirius

Sirius, also called the Dog Star, is the brightest star in our nighttime sky.

13 What is the nearest large spiral galaxy to our Milky Way?

A · Andromeda

Andromeda is the closest large spiral galaxy, about 2.5 million light-years away. The nearer Magellanic Clouds are dwarf galaxies.

14 Which shape best describes our Milky Way galaxy?

C · Barred spiral

The Milky Way is a large barred spiral galaxy, with a long bar of stars across its center.

15 A sugar-cube-sized scoop of neutron star would weigh about

A · 1 billion tons

Neutron star material is so dense that a sugar cube of it would weigh about 1 billion tons on Earth.

16 What is the point of no return around a black hole called?

B · Event horizon

Past the event horizon, gravity is so strong that nothing, not even light, can escape.

17 A rapidly spinning neutron star that sweeps beams of radiation past Earth is called a

D · Pulsar

Pulsars are spinning, highly magnetized neutron stars. Their beams sweep past us like a lighthouse.

18 About what share of the universe's total mass and energy is ordinary matter?

C · 5%

Ordinary matter is about 5% of the mass-energy. Dark matter is about 27% and dark energy about 68%.

19 About how old is the universe?

B · 13.8 billion years

Cosmologists date the Big Bang to about 13.8 billion years ago. Earth is only 4.5 billion years old.

20 Stars twinkle mainly because of

B · Earth's atmosphere bending starlight

Moving pockets of air bend starlight on its way down to us. Above the atmosphere, stars do not twinkle.

Round 3 · Space Exploration

10 POINTS

21 Which country launched Sputnik 1, the first artificial satellite, in 1957?

B · Soviet Union

The Soviet Union launched Sputnik 1 on Oct. 4, 1957, beginning the space age.

22 Who became the first human in space, in 1961?

D · Yuri Gagarin

Soviet cosmonaut Yuri Gagarin orbited Earth in Vostok 1 in 1961, on a flight lasting 108 minutes.

23 Who was the first woman in space, in 1963?

B · Valentina Tereshkova

Valentina Tereshkova flew Vostok 6 on June 16, 1963, becoming the first woman in space.

24 Which Apollo mission first landed people on the Moon?

C · Apollo 11

Apollo 11 carried Neil Armstrong, Buzz Aldrin and Michael Collins on the first crewed lunar landing, in July 1969.

25 Which Apollo 11 astronaut orbited the Moon alone while his two crewmates landed?

A · Michael Collins

Michael Collins stayed in the command module Columbia while Armstrong and Aldrin descended in the lunar module Eagle.

26 What was Laika, who orbited Earth aboard Sputnik 2 in 1957?

C · A dog

Laika, a dog, rode Sputnik 2 and became the first animal to orbit Earth.

27 Which Moon mission was cut short by an onboard explosion, yet its crew returned safely?

A · Apollo 13

An explosion on Apollo 13 cost power and oxygen, but the crew looped around the Moon and splashed down safely.

28 Who became the first American woman in space, in 1983?

D · Sally Ride

Sally Ride flew on space shuttle Challenger's STS-7 mission on June 18, 1983.

29 Hubble's first images in 1990 were blurry. What was wrong?

B · Its primary mirror had the wrong shape

Hubble's primary mirror had an aberration that blurred early images. A 1993 servicing mission installed corrective optics.

30 Launched in 1977, each Voyager spacecraft carries a golden what, meant for any alien finders?

D · Phonograph record

Each Voyager carries a gold-plated phonograph record of sounds and images selected to portray life on Earth.

Tiebreaker

TIEBREAKER

TB Tiebreaker: What is the average distance from Earth to the Moon, in kilometers?

About 384,400 km (238,855 miles)

The Moon is an average of 384,400 km (238,855 miles) from Earth.