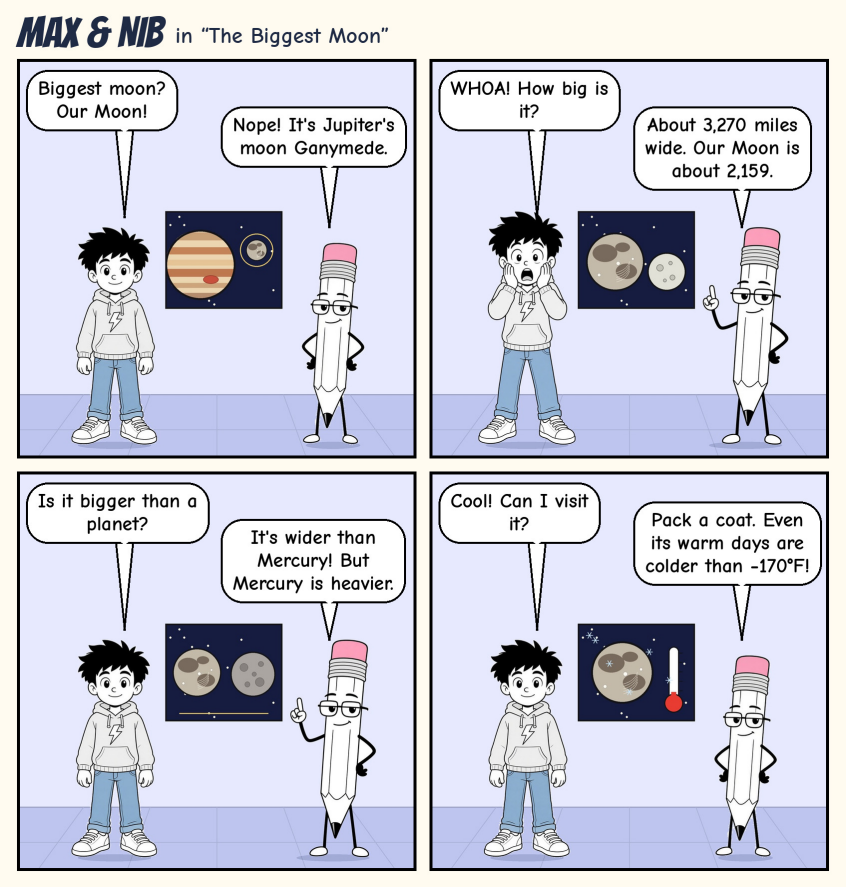


Name: _____ Date: _____

What's the Biggest Moon in the Solar System?

Space Science · Grades 3–6 · About 15 minutes · Max & Nib

Cool facts

What is the biggest moon in our solar system? It is not our Moon. It is Ganymede (say it: GAN-uh-meed), one of Jupiter's moons. NASA says Ganymede is about 3,270 miles wide. Our Moon is about 2,159 miles wide, so Ganymede is about one and a half times as wide. Ganymede is even wider than the planet Mercury! But wider does not always mean heavier. Mercury is made of dense rock and metal, and it has more than twice as much mass as Ganymede, which is about half ice. Ganymede is also the only moon known to have its own magnetic field. (Sizes are rounded.)

Cool Fact Ganymede circles Jupiter about every **7 Earth days**. (NASA)

Questions

1. What is the biggest moon in our solar system, and which planet does it orbit?

2. About how wide is Ganymede? About how wide is our Moon?

3. Ganymede is wider than Mercury. Which one is heavier, and why?

4. Ganymede is about 3,270 miles wide. Our Moon is about 2,159 miles wide. About how many miles wider is Ganymede?

Show your work

Write about it

If you could send a robot explorer to Ganymede, what would you want it to look for? Explain why.

What's the Biggest Moon in the Solar System? — Answer Key

Grades 3–6 · For teacher or parent use

Answers

1. What is the biggest moon in our solar system, and which planet does it orbit?

   Ganymede. It orbits Jupiter.

2. About how wide is Ganymede? About how wide is our Moon?

   Ganymede is about 3,270 miles wide. Our Moon is about 2,159 miles wide.

3. Ganymede is wider than Mercury. Which one is heavier, and why?

   Mercury is heavier. It is made of dense rock and metal, while Ganymede is about half ice.

4. Ganymede is about 3,270 miles wide. Our Moon is about 2,159 miles wide. About how many miles wider is Ganymede?

   About 1,111 miles (3,270 − 2,159 = 1,111).

Writing prompt: If you could send a robot explorer to Ganymede, what would you want it to look for? Explain why. Accept any reasoned answer for the writing prompt. For adults: NASA lists Ganymede's diameter as about 3,270 miles (5,260 km; NASA's fact sheet radius of 2,631.2 km gives about 5,262 km) and the Moon's as about 2,159 miles (3,475 km). Mercury is about 3,032 miles (4,879 km) wide. NASA Goddard's fact sheets list Ganymede's mass as about 1.48×10^{23} kg and Mercury's as about 3.30×10^{23} kg, so Mercury has a bit more than twice the mass. NASA gives Ganymede's daytime surface temperatures as about −297°F to −171°F.

Sources

- NASA Science: Ganymede Facts — https://science.nasa.gov/jupiter/jupiter-moons/ganymede/facts/
- NASA Science: Earth's Moon Facts — https://science.nasa.gov/moon/facts/
- NASA Goddard (NSSDCA): Jovian Satellite Fact Sheet — https://nssdc.gsfc.nasa.gov/planetary/factsheet/joviansatfact.html
- NASA Goddard (NSSDCA): Mercury Fact Sheet — https://nssdc.gsfc.nasa.gov/planetary/factsheet/mercuryfact.html

Word Record **Diameter**: the distance straight across a circle or ball, through its middle. It is how scientists compare how “wide” moons and planets are.

Cool Fact Sunlight takes about **43 minutes** to reach Jupiter and Ganymede. It reaches Earth in about 8 minutes. (NASA)