

# AEA Quiz Questions and Answers (Verified Answers)

1. what do asteroids and comets have in common?

**ANS** most are unchanged since their formation in the solar nebula

2. why do asteroids and comets differ in composition

**ANS** asteroids formed inside the frost line, while comets formed outside

3. what is the size of the largest asteroid?

**ANS** 1,000 km

4. the combined mass of all the asteroids in the asteroid belt is

**ANS** less than that of any terrestrial planet

5. the large gaps in the asteroid belt (often called Kirkwood gaps) are caused by

**ANS** orbital resonances with Jupiter

6. if we know the size of an asteroid, we can determine its density by

**ANS** determining its mass from its gravitational pull on a spacecraft, satellite, or planet

**7. why aren't small asteroids spherical in shape**

**ANS** the strength of gravity on small asteroids is less than the strength of the rock

**8. a typical shooting star in the meteor shower is caused by a \_\_\_\_\_ entering Earth's atmosphere**

**ANS** pea-size particle from an asteroid

**9. processed meteorites with high metal content probably are**

**ANS** chunks of a larger asteroid that was shattered by a collision

**10. in order to have a comet named after you, you have to**

**ANS** be one of the first three discoverers who report it to the International Astronomical Union (IAU)

**11. when do comets generally begin to form a tail?**

**ANS** Inside of Jupiter's orbit

**12. why won't Pluto collide with Neptune?**

**ANS** the two planets have an orbital resonance that prevents them