

*Test Bank for Explorations Introduction to Astronomy 8th  
Edition by Arny Schneider ISBN 0073513911 9780073513911*

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# Chapter 02 Test Bank: The Rise of Astronomy KEY

1. The Moon appears larger when it rises than when it is high in the sky because

- A. you are closer to it when it rises (angular-size relation).
- B. you are farther from it when it rises (angular-size relation).
- C. it's an illusion from comparison to objects on the horizon.**
- D. it's brighter when it rises.

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Easy*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Subtopic: Observational astronomy*

*Topic: History of Astronomy*

*Topic: Locating Objects in the Sky*

2. \_\_\_\_\_ was the first person to measure the circumference of the Earth.

- A. Ptolemy
- B. Copernicus
- C. Eratosthenes**
- D. Galileo
- E. Aristarchus

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Easy*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Historical: Shape and Size of the Earth*

*Topic: History of Astronomy*

3. When was it first known that the Earth was spherical in shape?

- A. It was always known to be spherical
- B. at the time of the Greeks**
- C. at the beginning of the Renaissance
- D. only after Galileo used a telescope to study other planets
- E. only recently within the last 100 hundred years

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Easy*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Historical: Shape and Size of the Earth*

*Topic: History of Astronomy*

4. What is the size of an object located at a distance of 1,000 meters and that has angular size  $A = 4$  degrees?

- A. about 11 meters
- B. about 35 meters
- C. about 70 meters
- D. about 4,000 meters

*Accessibility: Keyboard Navigation*

*Blooms Level: 3. Apply*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

5. The angular size of an object increases as the distance to the observer increases.

**FALSE**

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

6. The angular size of the Sun as observed from Earth is about 0.5 degree.

**TRUE**

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Subtopic: Historical: Distances and Sizes of the Sun and Moon*

*Topic: History of Astronomy*

7. The angular size of the Moon as observed from Earth is about 0.5 degree.

**TRUE**

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Subtopic: Historical: Distances and Sizes of the Sun and Moon*

*Topic: History of Astronomy*

**8. One observation supporting the idea of a spherical Earth is that \_\_\_\_\_.**

- A. the shape of the Earth's shadow on the Moon during an eclipse is circular
- B. a traveler moving south will see stars they could not previously see
- C. a ship moving away from the observer will move such that the hull is not seen, then the sails
- D. all of these choices are correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.01*  
*Subtopic: Historical: Shape and Size of the Earth*  
*Topic: History of Astronomy*

**9. The curved shape of the Earth's shadow during an eclipse was evidence for \_\_\_\_\_.**

- A. a flat, circular Earth
- B. a spherical Earth**
- C. a spherical Moon
- D. A flat, circular Moon
- E. None of these choices is correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.01*  
*Subtopic: Historical: Shape and Size of the Earth*  
*Topic: History of Astronomy*

**10. Which of the following is a contribution that Eratosthenes made to astronomy?**

- A. He determined the circumference of the Earth.**
- B. He discovered epicycles.
- C. He discovered his Three laws (of Planetary Motion).
- D. He was the first person known to have pointed a telescope at the sky.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.01*  
*Subtopic: Historical: Shape and Size of the Earth*  
*Topic: History of Astronomy*

**11. What is meant by the phrase "angular size"?**

- A. an object's diameter
- B. how big an object looks, expressed as an angle**
- C. the distance around an object
- D. the angle between two circular objects

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

**12. If you triple your distance from an object, what happens to its angular size?**

- A. It decreases by one half.
- B. It stays the same.
- C. It reduces to one third of what it was.**
- D. It increases by a factor of nine.

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

**13. The Sun and the Moon have an angular size of approximately \_\_\_\_.**

- A. 1 degree
- B. 5 degrees
- C. 0.5 degree**
- D. 23.5 degrees
- E. 2.35 degrees

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

14. The similarity of the Sun's and the Moon's angular sizes allow \_\_\_\_\_ to occur.

- A. tides
- B. lunar phases
- C. eclipses**
- D. sunspots
- E. seasons

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

15. The apparent size of an object based on the amount of sky it covers is called its \_\_\_\_\_.

- A. diameter
- B. shadow-width
- C. horizon
- D. angular size**
- E. celestial extent

*Accessibility: Keyboard Navigation*

*Blooms Level: 1. Remember*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

16. The Sun and the Moon have the same angular size. If the Sun is 400 times farther away than the Moon, the Sun must be \_\_\_\_\_ times the size of the Moon.

- A. 400**
- B. 1/400
- C. 1/4
- D. 4
- E.  $4\pi$

*Accessibility: Keyboard Navigation*

*Blooms Level: 3. Apply*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Subtopic: Historical: Distances and Sizes of the Sun and Moon*

*Topic: History of Astronomy*

17. One of two identical buildings is nearby, the other is twice as far away as the first. The angular size of the more distant building is \_\_\_\_\_ the nearby building's angular size.

- A. two times
- B. four times
- C. one half
- D. one fourth
- E. the same as

*Accessibility: Keyboard Navigation*

*Blooms Level: 3. Apply*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Topic: History of Astronomy*

18. When the Moon is on the horizon, it appears larger than when it is high in the sky. Why?

- A. When it is on the horizon, it is closer to us.
- B. This is an optical illusion.
- C. The brightness of the Moon makes it seem larger.
- D. The Earth's atmosphere acts like a lens, magnifying it.
- E. Its angular size is larger on the horizon.

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Medium*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Diameter-distance Relation (a.k.a. the small angle formula)*

*Subtopic: Historical: Distances and Sizes of the Sun and Moon*

*Topic: History of Astronomy*

19. One observation that supported an Earth-centered solar system is \_\_\_\_\_.

- A. retrograde motion
- B. the phases of the Moon
- C. the lack of parallax in the stars
- D. the shape of the Earth's shadow on the Moon
- E. the phases of Venus

*Accessibility: Keyboard Navigation*

*Blooms Level: 2. Understand*

*Difficulty: Easy*

*Gradable: automatic*

*Section: 02.01*

*Subtopic: Geocentric Models*

*Subtopic: Parallax*

*Topic: History of Astronomy*

20. The shift of a star's apparent position due to the Earth's motion around the Sun is called \_\_\_\_\_.

- A. parallax
- B. retrograde motion
- C. prograde motion
- D. geocentricity
- E. proper motion

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.01*  
*Subtopic: Geocentric Models*  
*Subtopic: Parallax*  
*Topic: History of Astronomy*

21. The parallax shift of a nearby star would be \_\_\_\_\_ that of a more distant star.

- A. greater than
- B. less than
- C. the same as
- D. brighter than
- E. faster than

*Accessibility: Keyboard Navigation*  
*Blooms Level: 3. Apply*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.01*  
*Subtopic: Parallax*  
*Topic: History of Astronomy*

22. The paths of the planets in the sky are tilted with respect to the celestial equator by about

- A. 5 degrees.
- B. 23 degrees.**
- C. 45 degrees.
- D. 90 degrees.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*



**23. One of the methods used to date supernova remnants (the remains of exploded stars) today is by using**

- A. the notebooks of Galileo.
- B. the records of ancient Chinese, Japanese, and Korean astronomers.**
- C. the works of Ptolemy.
- D. Kepler's laws.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**24. Which of the following objects passes through the zodiac?**

- A. Sun.
- B. Planets.
- C. Earth and Moon.
- D. All of these choices are correct.**
- E. None of these choices is correct.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Subtopic: The ecliptic*  
*Topic: History of Astronomy*  
*Topic: Locating Objects in the Sky*

**25. What is retrograde motion?**

- A. East to west motion of the Sun over many successive nights
- B. east to west motion of the Moon relative to the stars over many successive nights
- C. occasional east to west motion of the planets relative to the stars over many successive nights**
- D. occasional west to east motion of the planets relative to the stars over many successive nights

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

26. During retrograde motion, a planet moves from \_\_\_\_\_ to \_\_\_\_\_ relative to the stars.

- A. east; west (moves westward)
- B. west; east (moves eastward)

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

27. Retrograde motion is discernible by watching a planet over the course of

- A. a few minutes.
- B. many hours.
- C. many nights.
- D. many years.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

28. During the course of a single night, a planet that is moving in retrograde motion will move

- A. east to west.
- B. west to east.
- C. not at all.
- D. randomly about the sky.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

29. Imagine the much more massive Jupiter were to switch places with the less massive Mercury. Which of the following would accurately describe the outcome?

- A. Jupiter would orbit the Sun in less time than it did before.
- B. Mercury would orbit the Sun in less time than it did before.
- C. The orbital time for each of the planets would not change.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

30. The paths of the planets' orbits lie in all different directions in the sky.

**FALSE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

31. The inability to observe parallax of stars contributed to the ancient Greek astronomers' rejection of the idea that the Earth revolves around the Sun.

**TRUE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Geocentric Models*  
*Subtopic: Heliocentric Models*  
*Subtopic: Parallax*  
*Topic: History of Astronomy*

32. The motion of the Sun with respect to the stars is retrograde, i.e., east to west relative to the stars.

**FALSE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

33. During retrograde motion, the planet Mars rises in the west and sets in the east.

**FALSE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

34. Parallax is the shift in a star's apparent position due to the Earth's motion around the Sun.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 2. Understand  
Difficulty: Easy  
Gradable: automatic  
Section: 02.02  
Subtopic: Geocentric Models  
Subtopic: Heliocentric Models  
Subtopic: Parallax  
Topic: History of Astronomy*

35. The concept of the epicycle was introduced in the heliocentric model to explain the retrograde motion of the planets.

**FALSE**

*Accessibility: Keyboard Navigation  
Blooms Level: 1. Remember  
Difficulty: Medium  
Gradable: automatic  
Section: 02.02  
Subtopic: Epicycles  
Subtopic: Geocentric Models  
Subtopic: Motion of the planets  
Topic: History of Astronomy*

36. In the heliocentric model, the retrograde motion of the planets was explained as the consequence of the different orbital speeds of the planets, without the use of epicycles.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 1. Remember  
Difficulty: Medium  
Gradable: automatic  
Section: 02.02  
Subtopic: Epicycles  
Subtopic: Heliocentric Models  
Subtopic: Motion of the planets  
Topic: History of Astronomy*

37. Where on the celestial sphere would you look for the planets?

- A. on the celestial equator
- B. on the galactic equator
- C. in the zodiac (near the ecliptic)
- D. at the north celestial pole

*Accessibility: Keyboard Navigation  
Blooms Level: 2. Understand  
Difficulty: Easy  
Gradable: automatic  
Section: 02.02  
Subtopic: Motion of the planets  
Topic: History of Astronomy*

**38. If you see a bright "star" in the sky, how could you tell whether it is a star or a planet?**

- A. Planets are too dim to be seen without a telescope.
- B. Planets are round; stars have five points.
- C. Planets always appear right next to the Moon.
- D. Look at it several days later—if it's a planet, it will move across the background stars.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**39. The planets move \_\_\_\_\_ through the sky, relative to the background stars.**

- A. east to west
- B. west to east
- C. retrograde
- D. northeast to southwest
- E. none of these choices is correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**40. Of the earliest known planets, which exhibits retrograde motion?**

- A. all of these choices are correct
- B. none of these choices is correct
- C. only Mars
- D. Mercury, Venus, and Mars
- E. Mars and Mercury

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**41. What do we call it when a planet moves backward (east to west) through the stars?**

- A. retrograde motion
- B. the Zodiac
- C. regression
- D. prograde motion

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**42. Where will a planet in retrograde motion rise?**

- A. in the north
- B. in the south
- C. in the east (just like everything else in the sky)
- D. in the west (the opposite of everything else in the sky)

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

**43. The planets (other than Earth) known to ancient Western cultures were \_\_\_\_\_.**

- A. Mercury, Venus, and Mars
- B. Venus, Mars, Jupiter, and Saturn
- C. Venus, Jupiter, Saturn, Uranus, and Neptune
- D. Mercury, Venus, Mars, Jupiter, and Saturn
- E. Mercury, Mars, Jupiter, and Saturn

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

44. As the planets orbit the Sun, they are never far from the \_\_\_\_\_ on the celestial sphere.

- A. ecliptic
- B. celestial equator
- C. horizon
- D. celestial pole
- E. meridian

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

45. The path of the planets through the sky is tipped 23.5 degrees from the \_\_\_\_\_.

- A. celestial equator
- B. ecliptic
- C. zodiac
- D. north celestial pole
- E. the plane of the galaxy

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

46. The geocentric model was based on the observation that \_\_\_\_\_.

- A. everything moves around the Earth from east to west
- B. the sphere was a divine shape
- C. crystalline spheres rotated through the sky
- D. the Sun and Moon were flawless spheres
- E. the Earth is motionless in space

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Geocentric Models*  
*Topic: History of Astronomy*

47. One phenomenon that the geocentric models struggled to explain was \_\_\_\_\_.

- A. sunspots
- B. the rotation of the Earth
- C. retrograde motion
- D. parallax
- E. epicycles

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Geocentric Models*  
*Topic: History of Astronomy*

48. An epicycle was used in geocentric models to explain \_\_\_\_\_.

- A. parallax
- B. aurora
- C. retrograde motion
- D. eclipses
- E. the Earth's circular shadow

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Subtopic: Geocentric Models*  
*Topic: History of Astronomy*

49. Islamic scholars \_\_\_\_\_.

- A. studied and expanded upon older texts in astronomy
- B. made detailed studies of the motions of the planets
- C. influenced the naming of bright stars
- D. developed algebra
- E. all of these choices are correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Topic: History of Astronomy*



**50. Asian astronomers \_\_\_\_\_.**

- A. kept detailed records of unusual celestial events
- B. devised ways to predict eclipses
- C. recorded the existence of sunspots
- D. All of these choices are correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.02*  
*Topic: History of Astronomy*

**51. Kepler's Third, or harmonic, law states that the**

- A. period of an orbit cubed equals the semi-major axis squared.
- B. semi-major axis of an orbit cubed equals the period squared.
- C. planets move fastest when they are closest to the Sun.
- D. semi-major axis of an orbit is inversely proportional to the period.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler's Laws*  
*Topic: History of Astronomy*

**52. Copernicus' heliocentric model failed to work as well as it might to predict the positions of planets because Copernicus insisted the orbits were**

- A. circular.
- B. elliptical.
- C. circular, mounted on epicycles.
- D. hyperbolic.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Heliocentric Models*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

53. One of Tycho Brahe's major contributions to astronomy was to prove that \_\_\_\_\_ was \_\_\_\_\_.

- A. a supernova (exploding star); much farther away than the planets
- B. a comet; outside the Earth's atmosphere
- C. the Sun; the center of the solar system
- D. both A; and B
- E. A; B and C

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Geocentric Models*  
*Topic: History of Astronomy*

54. The general heliocentric model proposed by Copernicus was appealing, and eventually became preferred, because

- A. it explained why we do not observe stellar parallax.
- B. it replaced the Earth with the Sun as the center of the solar system.
- C. it was more aesthetically pleasing than the complicated Ptolemaic model.
- D. it made more accurate predictions than the Ptolemaic model.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Geocentric Models*  
*Subtopic: Heliocentric Models*  
*Topic: History of Astronomy*

55. In \_\_\_\_\_ models, the Sun is assumed as the center of the solar system.

- A. Heliocentric
- B. Geocentric

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Heliocentric Models*  
*Topic: History of Astronomy*

56. Galileo was the first to observe the phases of \_\_\_\_\_.

- A. the moon
- B. the venus**
- C. the earth

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Galileo*  
*Topic: History of Astronomy*

57. In Copernicus' model of the solar system, the planets orbited the \_\_\_\_\_ in \_\_\_\_\_ orbits.

- A. Earth; circular
- B. Sun; elliptical
- C. Sun; circular**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Heliocentric Models*  
*Topic: History of Astronomy*

58. \_\_\_\_\_ major contribution to astronomy is his extensive series of measurements of planetary positions.

- A. Tycho Brahe's**
- B. Galileo's
- C. Kepler's

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

59. \_\_\_\_\_ used the extensive records of planetary positions measured by \_\_\_\_\_ to discover that the orbits of the planets are \_\_\_\_\_.

- A. Tycho; Kepler; circular
- B. Tycho; Kepler; elliptical
- C. Kepler; Tycho; elliptical**
- D. Kepler; Galileo; elliptical

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

60. Kepler's \_\_\_\_ law states that the orbits of planets are elliptical, with the Sun at one focus.

- A. First**
- B. Second
- C. Third

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

61. From Kepler's \_\_\_\_ law, we conclude that the planets do not move with constant speed.

- A. First
- B. Second**
- C. Third

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

62. From Kepler's \_\_\_\_ law, we conclude that Mars completes a full orbit much faster than Pluto.

- A. First
- B. Second
- C. Third

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

63. Observations indicate that it takes Saturn longer than Jupiter to complete one orbit about the Sun. This is in agreement with which of Kepler's laws?

- A. First
- B. Second
- C. Third

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

64. The time between the vernal equinox and the autumnal equinox is somewhat greater than the time between the autumnal equinox and the vernal equinox. This is a result of Kepler's \_\_\_\_ law.

- A. First
- B. Second
- C. Third

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Hard*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

65. Copernicus' model was significantly better at predicting future positions of planets than Ptolemy's.

**FALSE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Heliocentric Models*  
*Topic: History of Astronomy*

66. Galileo deduced many empirical laws of motion before Newton was even born.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 1. Remember  
Difficulty: Medium  
Gradable: automatic  
Section: 02.03  
Subtopic: Galileo  
Topic: History of Astronomy*

67. During the month of January, the Earth goes through the point of closest approach to the Sun. Using Kepler's Second law we can conclude that the Earth moves faster in January than in July.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 2. Understand  
Difficulty: Easy  
Gradable: automatic  
Section: 02.03  
Subtopic: Kepler  
Subtopic: Motion of the planets  
Topic: History of Astronomy*

68. In geocentric theories, the Earth is assumed to be the center of the solar system.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 1. Remember  
Difficulty: Easy  
Gradable: automatic  
Section: 02.03  
Subtopic: Geocentric Models  
Topic: History of Astronomy*

69. The Sun is located at the center of the Earth's elliptical orbit.

**FALSE**

*Accessibility: Keyboard Navigation  
Blooms Level: 2. Understand  
Difficulty: Easy  
Gradable: automatic  
Section: 02.03  
Subtopic: Kepler  
Topic: History of Astronomy*

70. According to Kepler's laws the Sun is located at one of the foci of the Earth's orbit.

**TRUE**

*Accessibility: Keyboard Navigation  
Blooms Level: 1. Remember  
Difficulty: Easy  
Gradable: automatic  
Section: 02.03  
Subtopic: Kepler  
Topic: History of Astronomy*

71. Copernicus was able to calculate the distances to the observed planets relative to the Earth's distance from the Sun.

**TRUE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Heliocentric Models*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*

72. Which of the following is a contribution that Kepler made to astronomy?

- A. He determined the size of the Earth.
- B. He discovered epicycles.
- C. He discovered his Three laws (of Planetary Motion).
- D. He discovered four moons (or satellites) of Jupiter.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Kepler's Laws*  
*Topic: History of Astronomy*

73. Which of the following is a contribution that Galileo made to astronomy?

- A. He determined the size of the Earth.
- B. He discovered epicycles.
- C. He developed the first successful heliocentric theory.
- D. He discovered four moons (or satellites) of Jupiter.

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Easy*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Galileo*  
*Topic: History of Astronomy*

74. Galileo's observation of sunspots showed that \_\_\_\_\_.

- A. the Sun was not a flawless sphere
- B. the Earth revolved around the Sun
- C. planets moved along elliptical orbits around the Sun
- D. the stars could change
- E. none of these choices is correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Galileo*  
*Topic: History of Astronomy*

75. Galileo's observation of the satellites of Jupiter showed that \_\_\_\_\_.

- A. there were objects that did not orbit the Earth
- B. planets orbited the Sun
- C. the Moon was not a flawless sphere
- D. nothing orbited the Earth
- E. none of these choices is correct

*Accessibility: Keyboard Navigation*  
*Blooms Level: 2. Understand*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Section: 02.03*  
*Subtopic: Galileo*  
*Topic: History of Astronomy*

76. Tycho Brahe relied on the use of telescopes to record his accurate positions for the planets.

**FALSE**

*Accessibility: Keyboard Navigation*  
*Blooms Level: 1. Remember*  
*Difficulty: Medium*  
*Gradable: automatic*  
*Subtopic: Motion of the planets*  
*Topic: History of Astronomy*



# Chapter 02 Test Bank: The Rise of Astronomy Summary

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