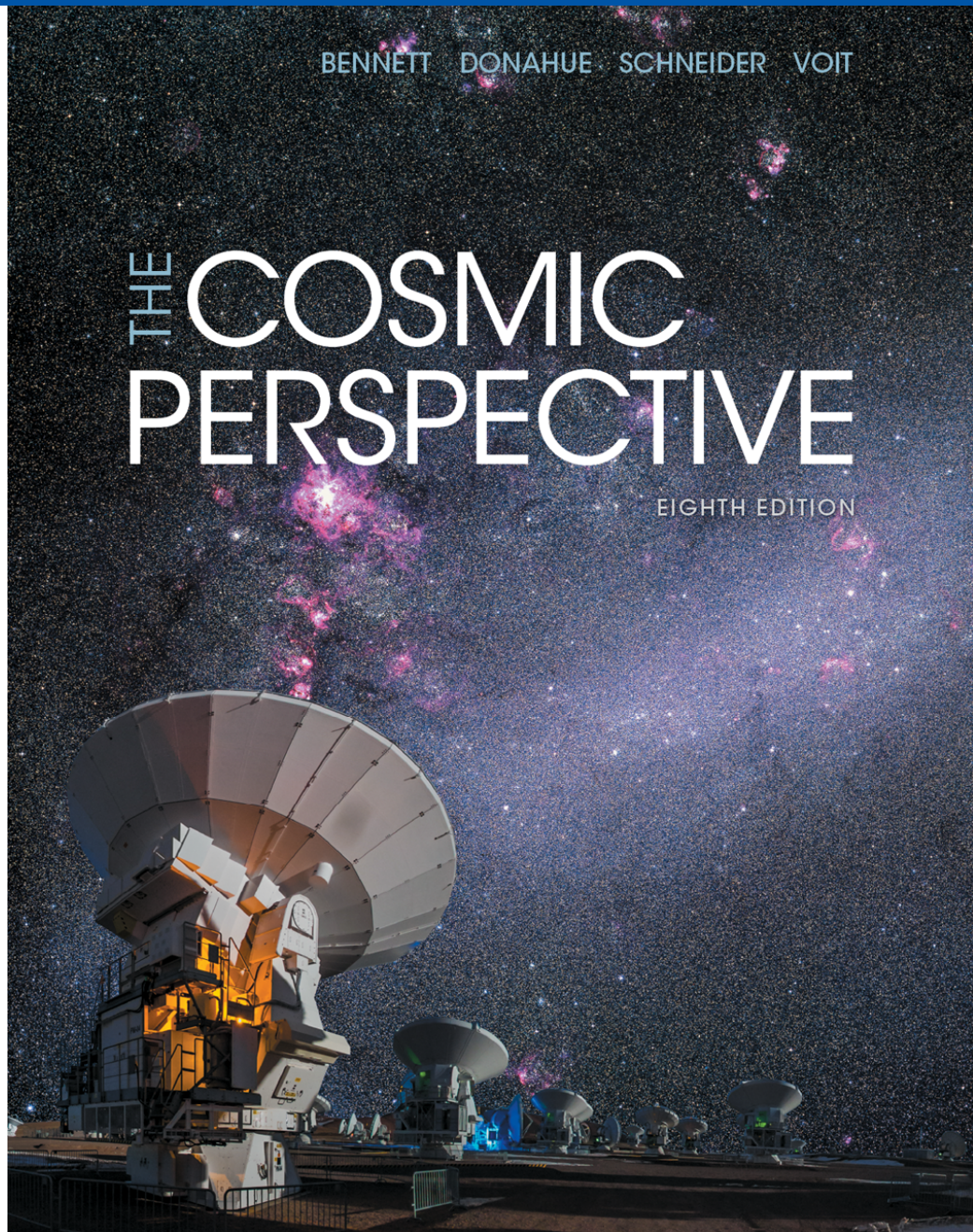
Reading Quiz Clickers

Chapter 7: Our Planetary System



7.1 Studying the Solar System

- What does the solar system look like?
- What can we learn by comparing the planets to one another?

What would we see if we could look at our solar system, without a telescope, from a spaceship beyond Neptune's orbit?

a) We would see the Sun, but nothing else.
b) We would see the Sun and the largest planets as pinpoints of light, but nothing else.
c) We would see the Sun, all the planets, and their moons, but nothing else.
d) We would see the Sun, all the planets and moons, and the largest asteroids and comets.

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Which lists the planets in order of increasing size (radius)?

a) Mercury, Earth, Mars, Venus, Jupiter, Saturn, Uranus, Neptune
b) Mercury, Venus, Mars, Earth, Neptune, Uranus, Jupiter, Saturn
c) Earth, Mercury, Venus, Mars, Saturn, Jupiter, Neptune, Uranus
d) Mercury, Mars, Venus, Earth, Neptune, Uranus, Saturn, Jupiter
e) Mars, Earth, Mercury, Venus, Saturn, Uranus, Neptune, Jupiter

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d) Mercury, Mars, Venus, Earth, Neptune, Uranus, Saturn, Jupiter

e) Mars, Earth, Mercury, Venus, Saturn, Uranus, Neptune, Jupiter

How does the size of the Sun compare to the size of Earth?

a) The Sun is about 3 times larger than Earth.
b) The Sun is about 10 times larger than Earth.
c) The Sun is about 100 times larger than Earth.
d) The Sun is about 1000 times larger than Earth.
e) The Sun is about 300,000 times larger than Earth.

How does the size of the Sun compare to the size of Earth?

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Which of the following planets has the densest atmosphere?

a) Mercury
b) Venus
c) Earth
d) Mars

Which of the following planets has the densest atmosphere?

a) Mercury
b) Venus
c) Earth
d) Mars

Which of the following planets has polar ice caps?

a) Earth
b) Mars
c) Mercury
d) all of the above
e) A and B

Which of the following planets has polar ice caps?

a) Earth
b) Mars
c) Mercury
d) all of the above
e) A and B

Which of the following planets has the most molecular oxygen in its atmosphere?

a) Earth
b) Mars
c) Venus
d) Mercury

Which of the following planets has the most molecular oxygen in its atmosphere?

a) **Earth**
b) Mars
c) Venus
d) Mercury

Which planet has the most moons?

a) Mercury
b) Mars
c) Venus
d) Earth
e) B and D

Which planet has the most moons?

a) Mercury
b) Mars
c) Venus
d) Earth
e) B and D

Which planet has a volcanically active moon?

a) Earth
b) Jupiter
c) Saturn
d) Uranus
e) Neptune

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a) Earth
b) Jupiter
c) Saturn
d) Uranus
e) Neptune

Which of the following planets has rings?

a) Jupiter
b) Saturn
c) Uranus
d) Neptune
e) all of the above

Which of the following planets has rings?

a) Jupiter
b) Saturn
c) Uranus
d) Neptune
e) all of the above

Which planet has the largest tilt to its rotation axis?

a) Jupiter
b) Saturn
c) Uranus
d) Neptune
e) They all have similar tilts.

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b) Saturn
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Which planet has a large moon that orbits in the opposite direction of the planet's rotation?

a) Earth
b) Jupiter
c) Saturn
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Which of the following is a characteristic of a dwarf planet?

a) A dwarf planet must be in the Kuiper Belt.
b) A dwarf planet cannot have any moons.
c) A dwarf planet must be round.
d) all of the above

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b) Venus
c) Earth
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b) Venus
c) Earth
d) Mars

Which of the following is *not* a characteristic of jovian planets?

a) They all have many moons.
b) They have a higher overall density than terrestrial planets.
c) They are larger than terrestrial planets.
d) They are farther from the Sun and farther apart from each other than the terrestrial planets.
e) They have deep atmospheres made of hydrogen, helium, and hydrogen compounds.

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What is the value of comparative planetology?

a) It helps us learn about a planet by studying processes that affect all planets.
b) It helps us understand planets around other stars that can be studied individually in great detail.
c) It helps us develop a theory for the formation of the solar system.
d) all of the above
e) A and B

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d) all of the above
e) A and B

7.2 Patterns in the Solar System

- What features of our solar system provide clues to how it formed?

What characteristic of the planets is nearly the same for all planets?

a) composition
b) orbit shape and orientation
c) rotation period (length of day)
d) size
e) temperature

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a) composition
b) orbit shape and orientation
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d) size
e) temperature

Which of the following is *not* a clue to the formation of the solar system?

a) The number of small rocky planets is equal to the number of large gas-rich planets.
b) There are a large number of small rocky and icy objects in different regions of the solar system.
c) The planets and moons generally orbit in the same plane.
d) The Earth has an unusually large moon.
e) Uranus has a large tilt to its rotation axis.

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7.3 Spacecraft Exploration of the Solar System

- How do robotic spacecraft work?

What spacecraft flew by Jupiter, Saturn, Uranus and Neptune?

a) Galileo
b) Cassini
c) Voyager 1
d) Voyager 2
e) none of the above

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Why do orbiters typically cost more than flyby missions?

a) They typically carry more scientific instruments.
b) They need expensive protection from the charged particles in a planet's magnetosphere.
c) They must carry extra fuel so that they can go into orbit.
d) They require more powerful radio systems to transmit data to Earth.
e) all of the above

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