Exercise B6: Size and Scale of the Solar System

Student name: _____ Class: _____ Date: _____

Check the box with the correct answer.

Question 1: The four inner planets of the solar system in order of distance from the Sun are:

- ☐ **a.** Earth, Mercury, Venus, Mars
- ☐ **b.** Mars, Venus, Mercury, Earth
- ☐ **c.** Mercury, Venus, Earth, Mars
- ☐ **d.** Mercury, Venus, Sun, Mars

Question 2: What do the four terrestrial planets have in common?

- ☐ **a.** They all revolve about the Sun in the same direction.
- ☐ **b.** They are all about the same physical size.
- ☐ **c.** They all have the same orbital shape, that is, ellipses with the same eccentricity.
- ☐ **d.** They all have the same aphelion distance.

Question 3: What is interesting about the status of Ceres in the Solar System?

- ☐ **a.** It orbits outside the main asteroid belt.
- ☐ **b.** It is the only dwarf planet in the main asteroid belt.
- ☐ **c.** Its orbit carries it over the N and S poles of the Sun.
- ☐ **d.** It orbits the Sun in the opposite direction of the terrestrial planets.

Question 4: The four outer planets of the solar system in order of distance from the Sun are:

- ☐ **a.** Saturn, Jupiter, Uranus, Neptune
- ☐ **b.** Neptune, Uranus, Jupiter, Saturn
- ☐ **c.** Jupiter, Saturn, Uranus, Neptune
- ☐ **d.** Sun, Jupiter, Uranus, Neptune

Question 5: What do the four terrestrial planets and the four gas giant planets all have in common?

- ☐ **a.** They all revolve about the Sun in the same direction.
- ☐ **b.** They are all about the same size.
- ☐ **c.** They all have identical orbital shapes, that is, ellipses with the same eccentricity.
- ☐ **d.** They all have the same aphelion distance.

Question 6: What is the approximate distance in au between the Sun and the farthest gas giant planet? Use the **Angular Separation Tool** to measure the appropriate distance.

- ☐ **a.** 30 AU
- ☐ **b.** 19 AU
- ☐ **c.** 9 AU
- ☐ **d.** 5 AU

Question 7: The three dwarf planets in the Kuiper belt are:

- ☐ **a.** Pluto, Haumea, Makemake
- ☐ **b.** Neptune, Pluto, Ceres
- ☐ **c.** Neptune, Haumea, Makemake
- ☐ **d.** Pluto, Haumea, Uranus