Discussion Review Test #1

Units 1-4:

(1) What larger group of galaxies is the Milky Way located in?
   a. The Local Group
   b. The Andromeda Group
   c. The M31 Group
   d. The Mars Bars Group

(2) An AU is the distance between
   a. Earth and Mars
   b. Sun and Earth
   c. Earth and the Moon
   d. Sun and Pluto
   e. Observatory Drive and Johnson

(3) Which of the following size orders is correct (smallest to largest)?
   a. Galaxy, earth, cluster, group, supergroup
   b. Earth, solar system, galaxy, group, cluster
   c. Earth, solar system, galaxy, cluster, group
   d. Earth, galaxy, solar system, cluster, group
   e. Galaxy, solar system, cluster, earth, group

(4) Convert 742 km to millimeters
   a. 7.42 x10^8
   b. 7.42 x10^5
   c. 74.2 x10^8
   d. 7.42 x10^6

(5)
The radius of the Earth is 6400 km, and the radius of the Sun is $7.0 \times 10^5$ km. If the sun is a grapefruit with a radius of 35 cm, what is the radius of the Earth?

- 0.32 cm
- 3.2 cm
- 0.32 km
- 0.032 cm
- 0.032 km

1.9327$x \times 10^8$ can also be written as

- 0.000000019327
- 19327
- 193270000
- 193270000

What is $10^8/10^5$?

- $10^3$
- $10^2$
- $10^{(8/5)}$
- $10^{13}$

What causes the seasons?

- The changing distance between the earth and the sun
- The tilt of the earth on its rotation axis
- The atmospheres’ blocking of solar radiation
- Lunar cycles
- None of the above

When do planets undergo retrograde motion?

- Every night
- When the planets are eclipsed by their moons
- When the planets go through an epicycle
- When a planet on a smaller orbit overtakes and passes another planet on a larger orbit

During what season is the sun highest in the sky (in Madison, WI)?

- Summer
- Winter
- Spring
- Fall
List in order from shortest to longest time scale, Earth’s:
   a. Precession, Orbit, Spin
   b. Spin, Orbit, Precession
   c. Orbit, Spin, Precession
   d. Depends on the time of year

During a solar eclipse,
   a. the Earth’s shadow falls on the sun
   b. the moon’s shadow falls on the Earth
   c. the sun shadow falls on the moon
   d. the Earth’s shadow falls on the moon

The phases of the moon are caused by:
   a. seeing different amounts of the moon’s surface illuminated by the sun
   b. Earth’s shadow projected onto the moon’s surface
   c. The same side of the moon is always seen from Earth
   d. Both a and c

Eclipses are relatively rare due to:
   a. Earth’s 23.5 degree tilt
   b. The Moon’s fast rotation about the Earth
   c. The tilt of the moon’s orbit relative to the ecliptic
   d. All of the above

The circular shape of the Earth’s shadow on the moon led early astronomers to conclude that:
   a. the Earth is a sphere
   b. the Earth is at the center of the Solar System
   c. the Earth must be at rest
   d. the moon must orbit the sun
(18) The ancient Greek’s are NOT credited with:
   a. measuring the size of the Earth
   b. finding the relative sizes of the Earth and the moon
   c. determining that the Earth is round
   d. detecting the parallax of stars
   e. suggesting a heliocentric model of the solar system

(19) If the moon were half as far away from the Earth, its angular size would be:
   a. twice as big
   b. half as big
   c. four times as big
   d. one-quarter as big
   e. the same as it is now

(20) Planets remain close to the ecliptic because:
   a. The solar system is approximately flat
   b. The Earth rotates about the sun
   c. The precession of the Earth
   d. All of the above