

Astro 10 Jeffardy Review 1

1. Celestial Sphere

- 100 What is the point in the sky directly overhead called? Zenith
- 200 What do we call stars that are visible in the local sky on any clear night of the year, all night long? Circumpolar
- 300 What is the ecliptic plane? The plane of the Earth's orbit around the sun or The line that the planets, sun, and moon appear to follow on the sky.
- 400 What coordinate on the Earth's surface can be found using the altitude of the north celestial pole? Latitude
- 500 What is the name of the bright star that is extremely close to the north celestial pole? Polaris or the North Star

2. Seasons

- 100 Which season's days have the most daylight hours? Summer
- 200 During which northern hemisphere season is the Earth closest to the sun? Winter
- 300 Would winter be colder or warmer if the Earth's axis tilt was 30°? Colder
- 400 In Australia, at noon during what month does the sun get closest to the northern horizon? June
- 500 When is the sun, viewed from the equator, directly overhead at noon? The equinoxes (about 3/21 and 9/22)

3. Phases of the Moon and Lunar and Solar Eclipses

- 100 What are the 8 phases of the moon? Full, new, first quarter, third quarter, waxing gibbous, waning gibbous, waxing crescent, and waning crescent
- 200 Lunar eclipses occur only during which lunar phase? Full
- 300 About how often would we see solar eclipses if the moon's orbit around the Earth were flat? About every month
- 400 You see the moon rising at sunset. What is its phase? Full
- 500 Suppose you see the moon is full. What phase of the Earth would an astronaut on the moon see? New Earth

4. History

- 100 Ptolemy's model of the Universe, which was accepted as fact for well over 1000 years, had what at the center? Earth
- 200 Who first used a telescope to study the heavens? Galileo
- 300 Small circular orbits that were added to the Ptolemaic model so it would better match observations were called what? Epicycles
- 400 Whose detailed observations did Kepler use to help come up with his three laws of planetary motion? Tycho Brahe
- 500 How did Copernicus keep from getting in trouble with the Catholic Church for his sun-centered cosmology?
He published it only after his death

5. Miscellaneous

- 100 Which is larger: our solar system or the Milky Way? Milky Way
- 200 What is it called when a planet appears to move backwards against the stationary, background stars? Retrograde motion
- 300 The sun is a ball a little taller than me at one end of Memorial Stadium. If I want to keep the relative scale of the sizes and distances correct, approximately where do I have to place the Earth and how big would it have to be? Opposite end of the stadium and as big as a marble
- 400 From Earth, which planets appear to undergo retrograde motion? All
- 500 The gradual wobble of the Earth's North Pole is called what? Precession

Final: Latitudes

The Tropic of Capricorn is at what latitude? 23.5° S

What is the Tropic of Capricorn? It's the latitude on the Earth where the sun is at the zenith at noon on the winter solstice.