

QUIZ #1

Circle your answer for each of the following. Be sure to fill in your name!

1. Early skywatchers distinguished Mercury, Venus, Mars, Jupiter, and Saturn because of their
a) brightness. b) size. c) temporary visibility. **d) unusual (and erratic) movements.**
2. We experience seasons on Earth because of
a) the shape of our orbit. **b) the angle between our orbit and equator.**
c) the Moon's influence. d) the transparency of our atmosphere.
3. The Moon's phases happen because of
a) the Earth's shadow. **b) the Moon's orbit and direction of sunlight.**
c) its synchronized orbit and rotation. d) differences between its two hemispheres.
4. One of the first clues to the shape of the Earth came from
a) lunar eclipses. b) Newton's discovery that gravity acts in all directions.
c) surveying of distances across it. d) the fact that stars rise and set like the Sun.
5. A planet undergoes *retrograde motion* when it
a) changes the direction of its orbit around the Sun.
b) appears to reverse its normal west-to-east motion as seen from Earth.
c) changes the orientation of its elliptical orbit.
d) spins in a direction opposite its orbit.
6. When they happen as close together as possible, a solar eclipse and a lunar eclipse are separated by about
a) twelve hours. c) one month.
b) two weeks. d) six months.
7. Scientists find that "Occam's Razor" is often a good guide as to which ideas they should investigate first. This principle says that
a) Facts should be "shaved away" in search of the underlying pattern.
b) New facts demand new explanations.
c) The simplest possible explanation must be right.
d) The simplest explanation which accounts for the data is usually right.
8. Kepler showed that orbits of objects around the Sun (for example) are
a) elliptical. c) spirals, slowly working inward.
b) circular or parabolic. d) multiple nested circles.
9. Among Galileo's discoveries, the one *most directly* distinguishing between Copernicus' Sun-centered scheme and the old Earth-centered one was
a) moons of Jupiter. c) sunspots.
b) the phases of Venus. d) lunar craters and mountains.
10. Eratosthenes of Alexandria estimated the size of the Earth 2200 years ago, based on
a) shadows at midsummer. b) sailors' logs.
c) the shadow of the Earth. d) weather patterns at different latitudes.