

# Earth-Moon-Sun System Test Review

Mr. Trulsson (January 28, 2008)

1. **On what day is the Earth closest to the Sun?** *January 3<sup>rd</sup>.*
2. **On what day is the Earth farthest from the Sun?** *July 4<sup>th</sup>.*
3. **What is the approximate average distance from the Earth to the Sun?** *150,000,000 km.*
4. **What is the approximate diameter of the Earth?** *12,700 km.*
5. **What is the Earth doing when it revolves?** *Orbiting the Earth.*
6. **What is the Earth doing when it rotates?** *Spinning on its axis.*
7. **What is the Earth's period of rotation?** *About one day (23hrs., 56min.).*
8. **What is the Earth's period of revolution?** *One year (365.25 days).*
9. **In what direction, when viewed from the North Pole, does the Earth rotate?** *Counter-clockwise.*
10. **In what direction, when viewed from the North Pole, does the Earth revolve?** *Counter-clockwise.*
11. **Why does the Earth have seasons?** *The hemisphere that is tilted towards the Sun varies as the Earth orbits the Sun.*
12. **What is the tilt of the Earth's axis (as compared to the Sun's axis)?** *23.5 degrees.*
13. **What is the latitude of the Tropic of Cancer?** *23.5° N.*
14. **What is the latitude of the Tropic of Capricorn?** *23.5° S.*
15. **What is the imaginary line around which the Earth spins called?** *Axis.*
16. **State the approx. dates when spring, summer, fall and winter officially begin in the Northern Hemisphere:** **Spring:** *March 21*; **Summer:** *June 21*; **Fall:** *September 21*; **Winter:** *December 21.*
17. **On what days of the year is the Sun directly over the Equator?** *March 21 and September 21.*
18. **On what day of the year is the Sun directly over the Tropic of Cancer?** *June 21.*
19. **When does the summer solstice occur in the Northern Hemisphere?** *June 21.*
20. **When does the winter solstice occur in the Northern Hemisphere?** *December 21.*
21. **In the Northern Hemisphere, what day has the shortest period of daylight and longest period of darkness?** *December 21, the winter solstice.*
22. **In the Northern Hemisphere, what day has the longest period of daylight and shortest period of darkness?** *June 21<sup>st</sup>, the summer solstice.*
23. **When are there 12 hours of daylight and 12 hours of darkness everywhere on Earth (except the poles)?** *The two equinoxes, March 21 and September 21.*
24. **In Dallas, in what direction does the Sun rise on March 21<sup>st</sup>?** *East.*
25. **In Dallas, in what direction does the Sun rise on June 21<sup>st</sup>?** *Northeast.*
26. **In Dallas, in what direction does the Sun rise on December 21<sup>st</sup>?** *Southeast.*
27. **Where on Earth is there the greatest difference in daylight hours between summer and winter?** *At the North Pole and South Pole, where there is 24 hours of daylight in summer and 24 hours of darkness in winter.*
28. **Where on Earth is there the least difference in daylight hours between summer and winter?** *At the equator, where the number of daylight hours only varies by about an hour.*

29. **How long does it take for the Moon to complete one cycle of lunar phases, from one New Moon to the next?** *29.5 days.*
30. **How long does it take for the Moon to revolve once around the Earth?** *27.3 days.*
31. **How long does it take for the Moon to rotate once on its axis?** *27.3 days.*
32. **As viewed from above the North Pole, in what direction does the Moon rotate and revolve?** *Counter-clockwise.*
33. **What kind of eclipse occurs when the moon casts a shadow on the Earth?** *A solar eclipse, where the view of the Sun is blocked (eclipsed) by the Moon, as seen from Earth.*
34. **What kind of eclipse occurs when the Earth casts a shadow on the Moon?** *A lunar eclipse, where the sunlight reaching the Moon is blocked by the Earth, making it appear from the Earth as if the Moon were being blocked (eclipsed).*
35. **What is the area of total eclipse called?** *Umbra.*
36. **What is the area of partial eclipse called?** *Penumbra.*
37. **During what years did U.S. astronauts actually walk on the Moon?** *1969 to 1972.*
38. **What is the primary cause of ocean tides?** *The Moon's gravity.*
39. **Which kind of tide has the biggest range between high and low tides?** *Spring.*
40. **Which kind of tide has the smallest range between high and low tides?** *Neap.*
41. **What kind of tide occurs during a 1<sup>st</sup> Quarter and 3<sup>rd</sup> Quarter Moon?** *Neap.*
42. **What kind of tide occurs during a Full Moon and New Moon?** *Spring.*
43. **List each of the eight moon phases in order, and complete a flow map diagram of each, shading the shadow areas and leaving the lit areas white. Bonus: State the rising time for each of the Moon Phases in the inner blanks.**

