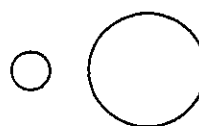
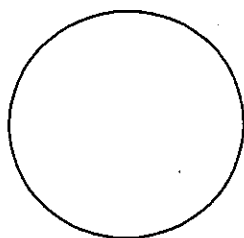
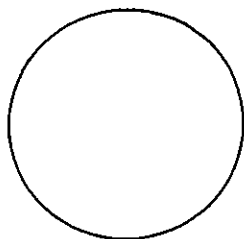


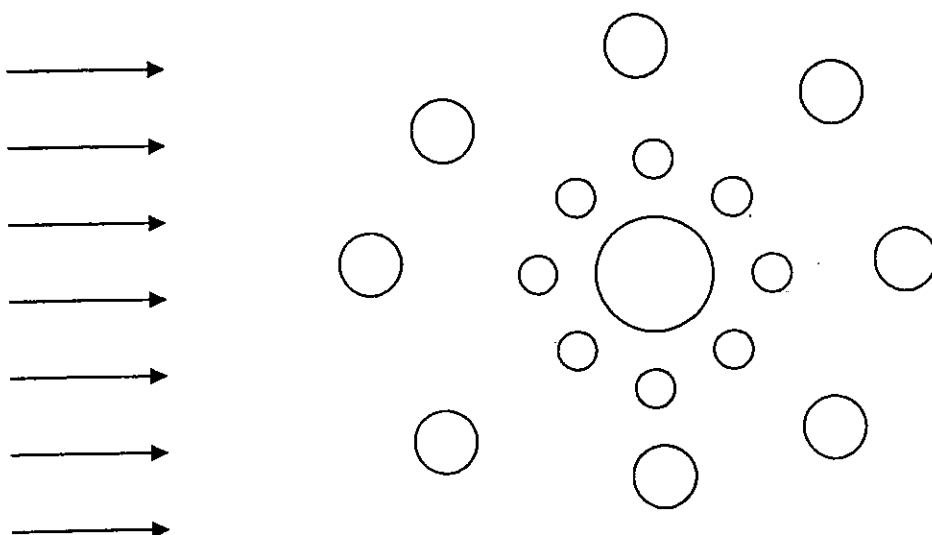
### Moon Motions: Notes Handout

**Eclipses.** Draw and label a lunar eclipse and a solar eclipse using the circles below. Be sure to label the Earth, Sun, Moon, penumbra, and umbra.



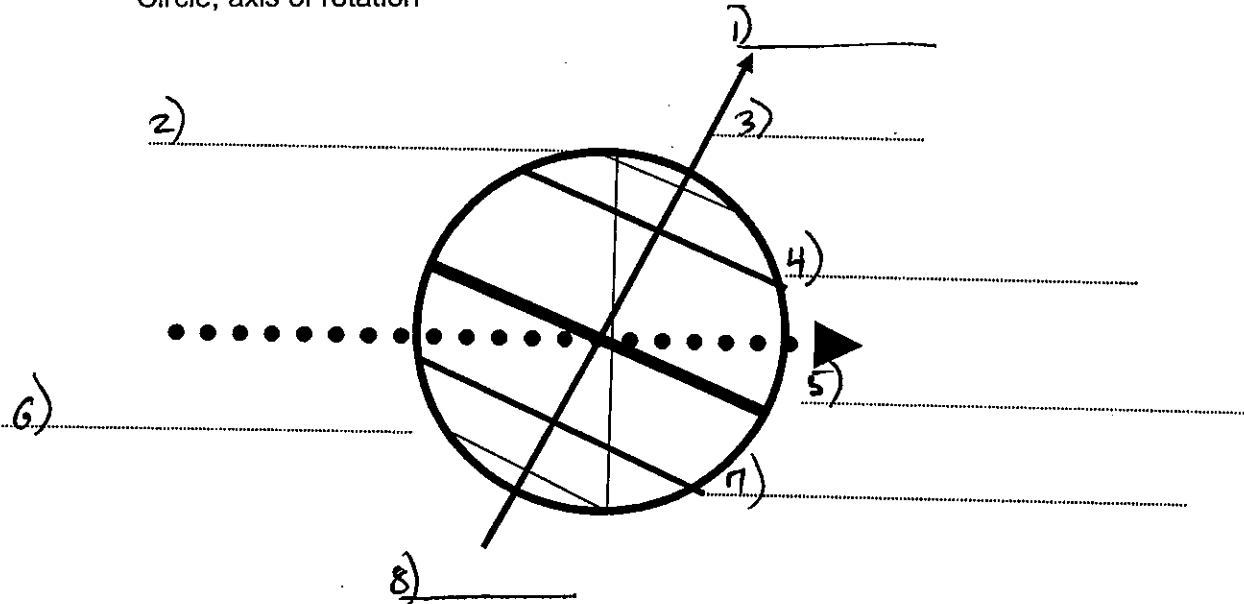
Penumbra = light shadow  
Umbra = dark shadow

**Lunar Phases.** Shade and label the following moon phases: new, full, waxing and waning crescent, waxing and waning gibbous, 1<sup>st</sup> and 3<sup>rd</sup> quarter. Assume the smaller, inner circles represent the view of the moon from space, while the larger, outer circles are the moon as seen from Earth.



Earth's Motions: Notes Handout

Refer to Chapter 28 and label the diagram of Earth below with the following terms: North Pole, South Pole, Tropic of Cancer, Tropic of Capricorn, equator, Antarctic Circle, Arctic Circle, axis of rotation



Label the diagram of Earth's seasons below with the following terms: spring equinox, autumnal equinox, summer solstice, winter solstice, apogee, perigee, ecliptic

