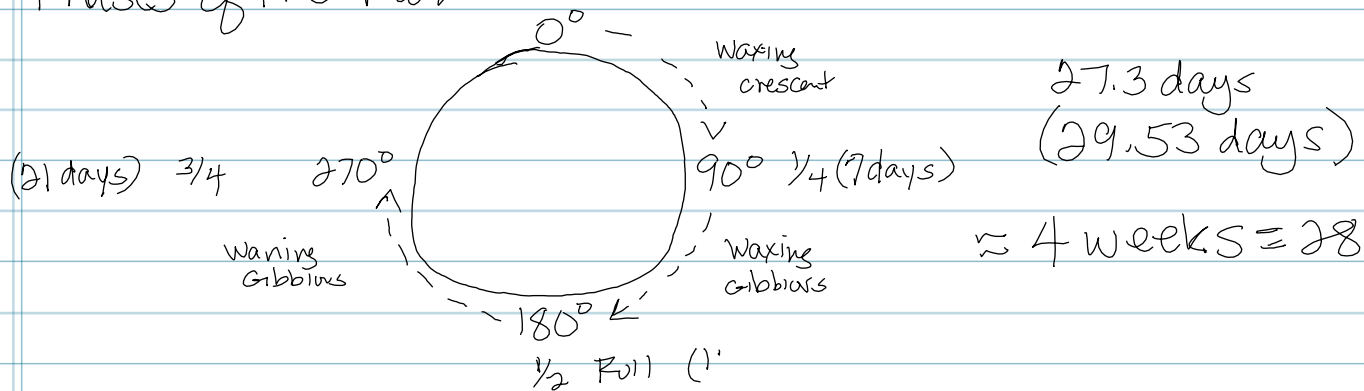


11/13

## Phases of the Moon



$0^\circ$ - New Moon	Day 1
$>0^\circ$ - Waxing Crescent $<90^\circ$	
$90^\circ$ - First Quarter	$\approx$ Day 7
$>90^\circ$ - Waxing Gibbous $<180^\circ$	
$180^\circ$ - Full Moon	$\approx$ Day 14
$>180^\circ$ - Waning Gibbous $<270^\circ$	
$270^\circ$ - Third Quarter	$\approx$ Day 21
$>270^\circ$ - Waning Crescent $<360^\circ$	

Earth revolves (orbits)  
rotates (spins)

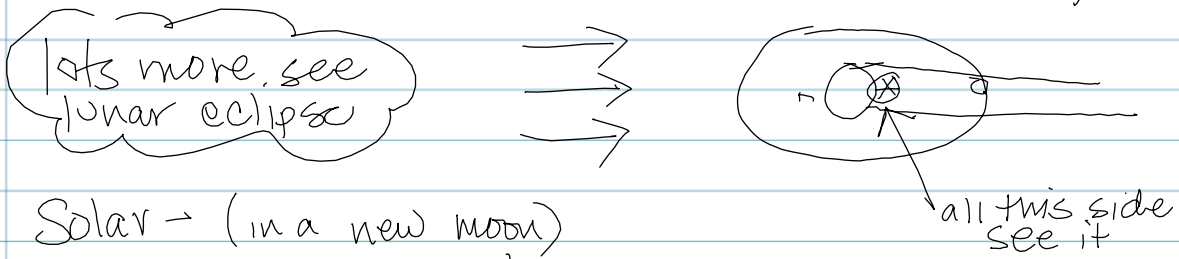
Moon only revolves (orbits)

Sun / Earth / Moon - gravity makes them revolve  
velocity keeps them in place  
 $>98\%$  of solar system's mass  
(speed / direction)

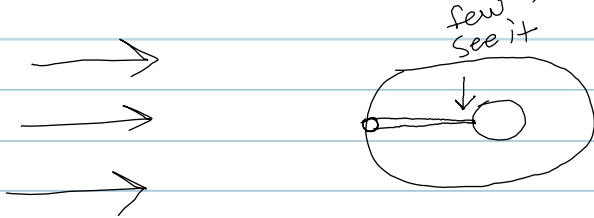
Question - Why is a moon cycle 27.3 days in space, but 29.53 days for the Earth's view?

# Eclipses

Lunar - (in a full moon) moon is shadowed by Earth



Solar - (in a new moon)



Moon has 5° tilt

## Science Quiz #5

11-13-14

1. What phase is at  $90^\circ$ ? \_\_\_\_\_
2. What phase is at  $270^\circ$ ? \_\_\_\_\_
3. What phase is at  $360^\circ$ ? \_\_\_\_\_
4. What phase is from  $>90^\circ < 180^\circ$ ? \_\_\_\_\_
5. What phase is from  $>270^\circ < 360^\circ$ ? \_\_\_\_\_
6. The Earth rotates (\_\_\_\_\_ ) and revolves (\_\_\_\_\_ ).
7. The moon only rotates / revolves?
8. The moon doesn't block (eclipse) often because?
9. What happens in a solar eclipse?
10. What happens in a lunar eclipse?