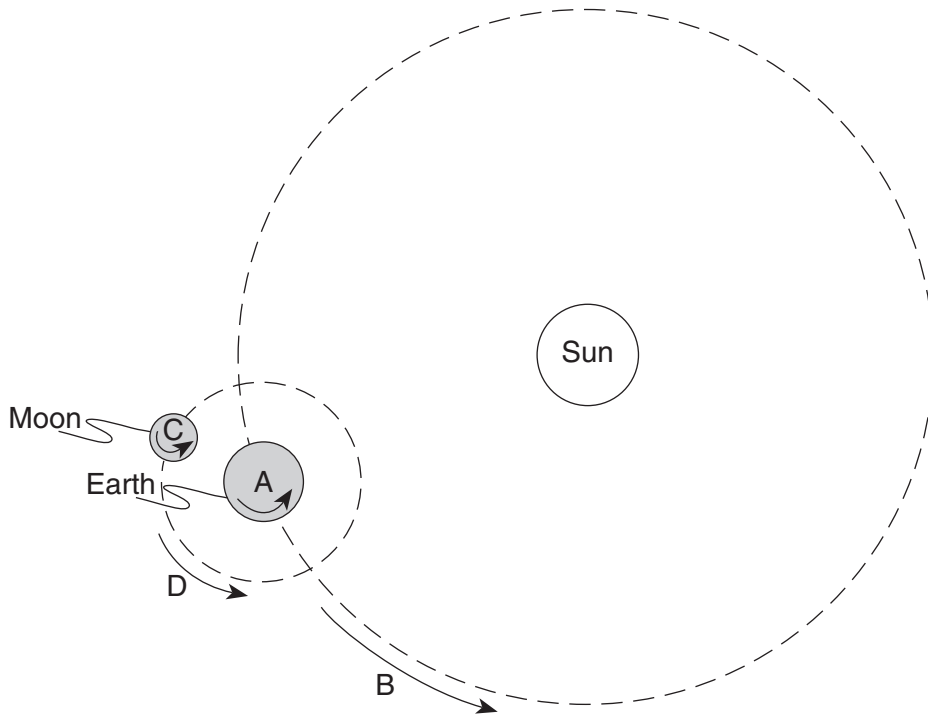
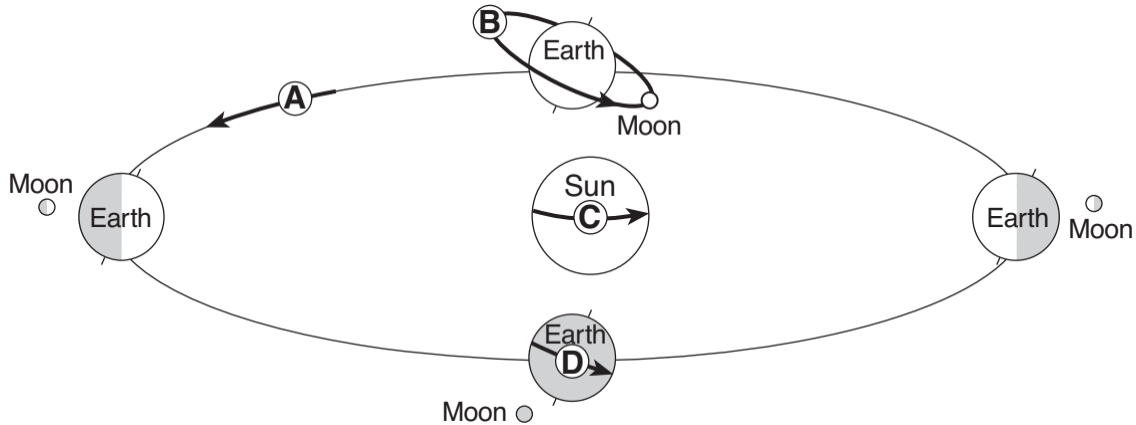


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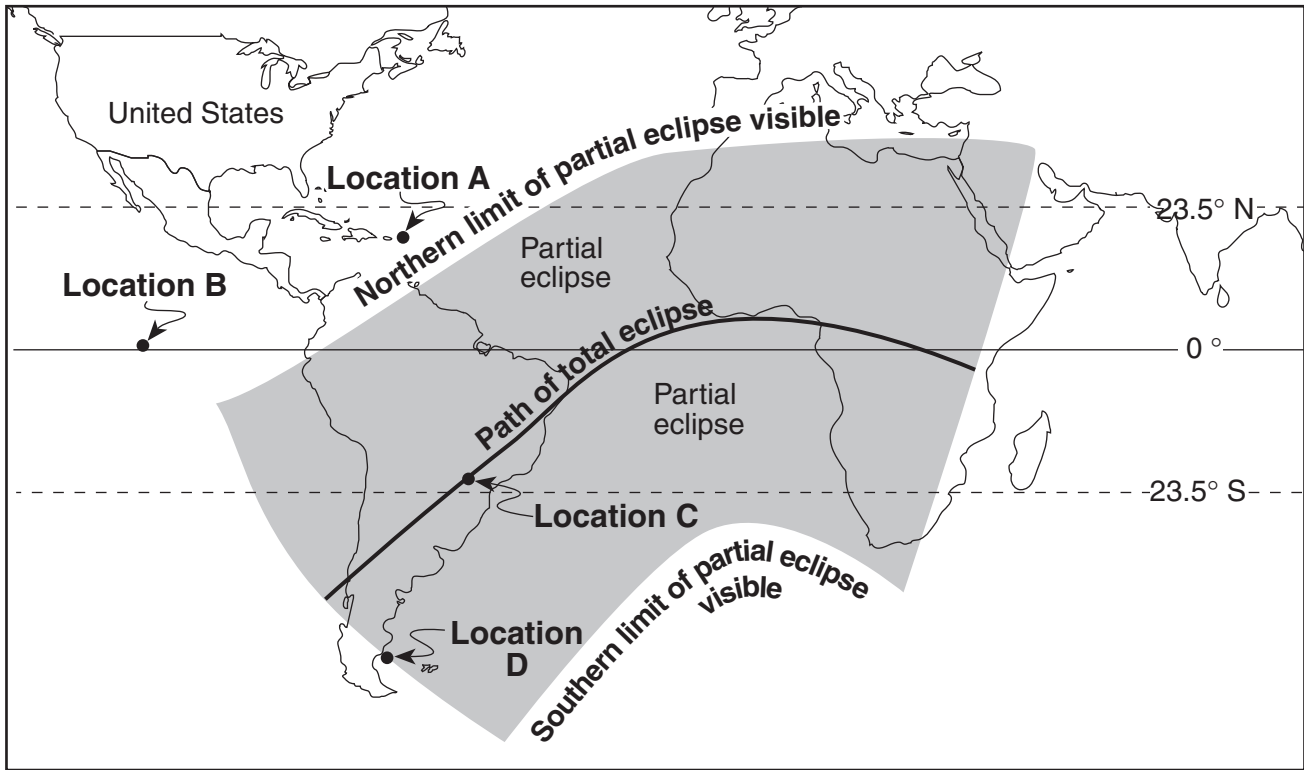


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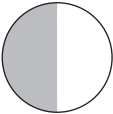
Key	
Arrow	Motion
A	Earth's rotation on its axis
B	Earth's revolution around the Sun
C	The Moon's rotation on its axis
D	The Moon's revolution around Earth



Solar Eclipse May 20, 1947



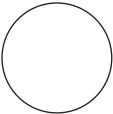


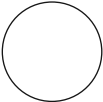



















July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 1	2	3	4	5	6	7
 8	9	10	11	12	13	14
15		17	18	19	20	21
22		24	25	26	27	28
29		31				

Key



New Moon



First-quarter Moon



Full Moon










Last-quarter Moon

Information About the Moon

Subject	Current Scientific Theories
Origin of the Moon	Formed from material thrown from a still-liquid Earth following the impact of a giant object 4.5 billion years ago
Craters	Largest craters resulted from an intense bombardment by rock objects around 3.9 billion years ago
Presence of water	Mostly dry, but water brought in by the impact of comets may be trapped in very cold places at the poles
Age of rocks in terrae highlands	Most are older than 4.1 billion years; highland anorthosites (igneous rocks composed almost totally of feldspar) are dated at 4.4 billion years
Age of rocks in maria plains	Varies widely from 2 billion to 4.3 billion years
Composition of terrae highlands	Wide variety of rock types, but all contain more aluminum than rocks of maria plains
Composition of maria plains	Wide variety of basalts
Composition of mantle	Varying amounts of mostly olivine and pyroxene

Data Table

Date	Maximum Altitude of Moon ($^{\circ}$)	Phase of Moon
January 4	26	new 
January 13	63	first quarter 
January 19	72	full 
January 26	35	last quarter 
February 3	34	new 
February 11	70	first quarter 
February 18	60	full 
February 25	27	last quarter 

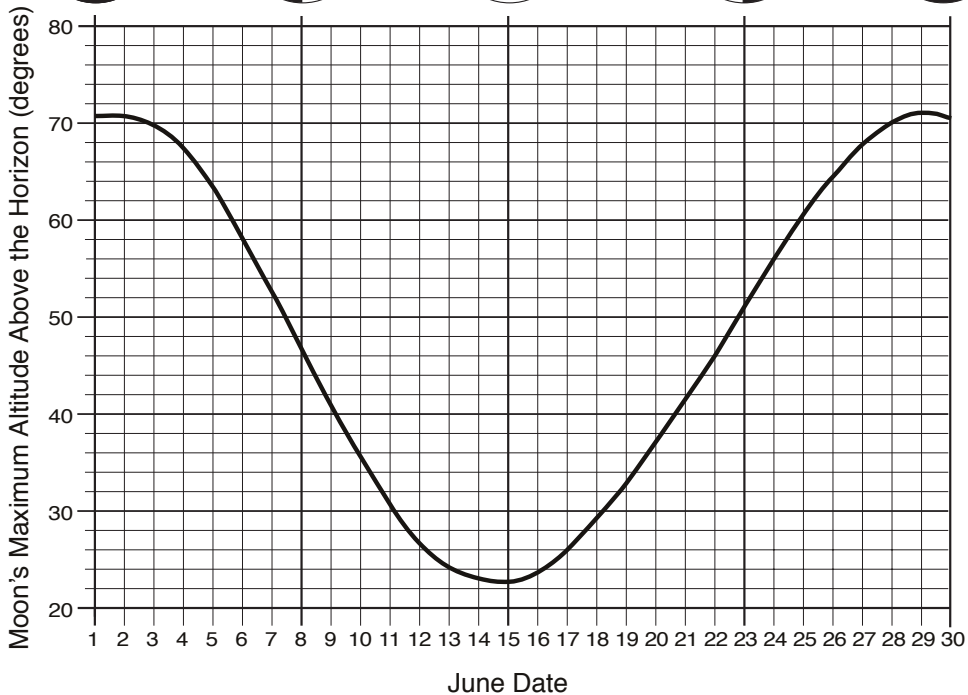
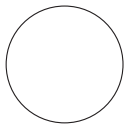
New Moon

First quarter

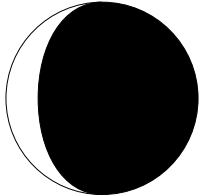
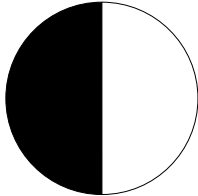
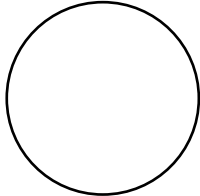
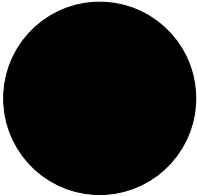
Full Moon

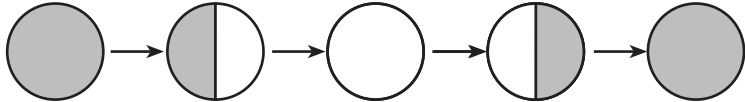
Last quarter

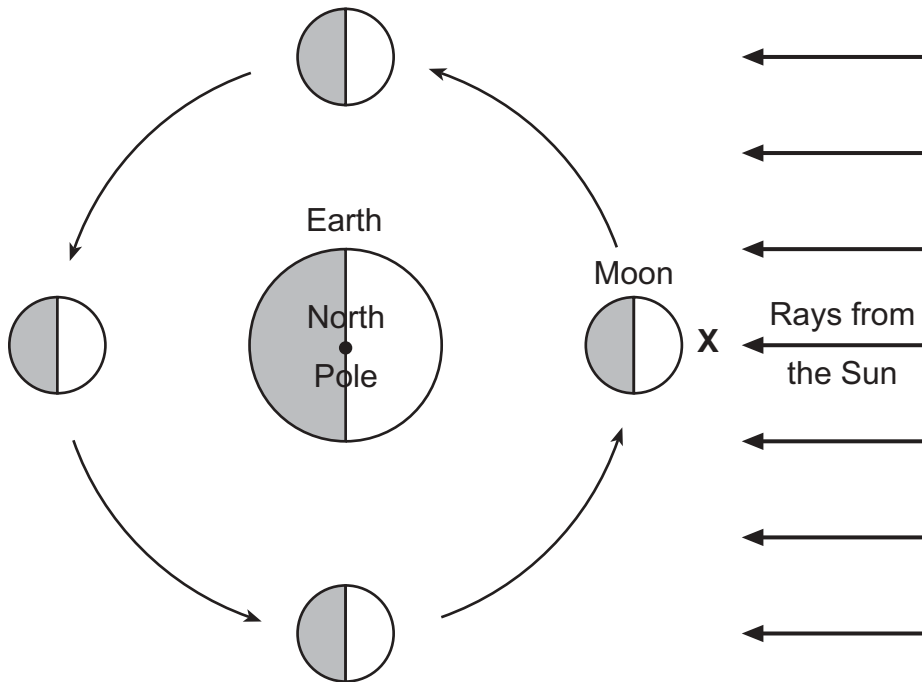
New Moon



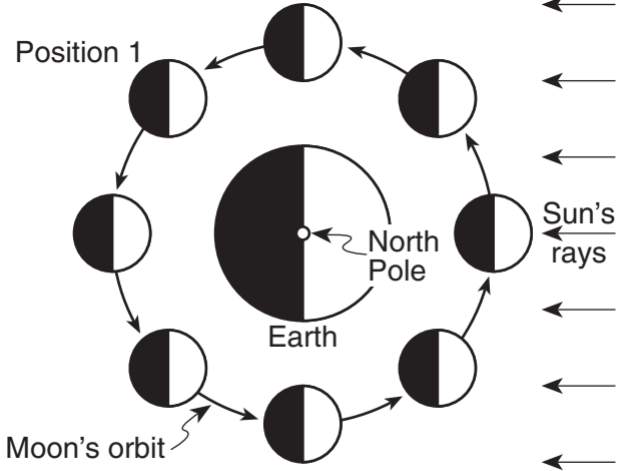




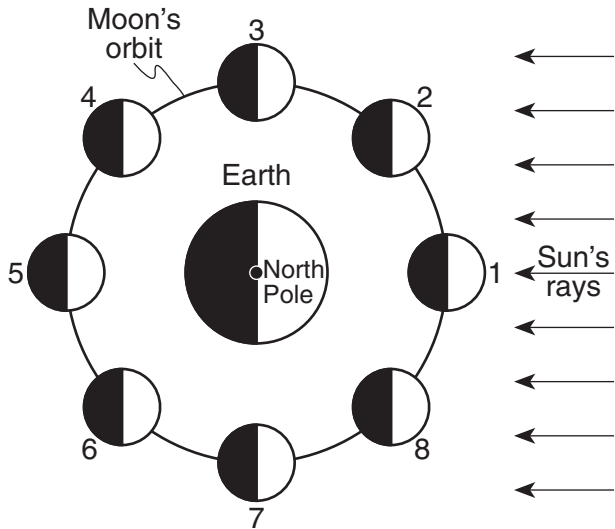




(Not drawn to scale)

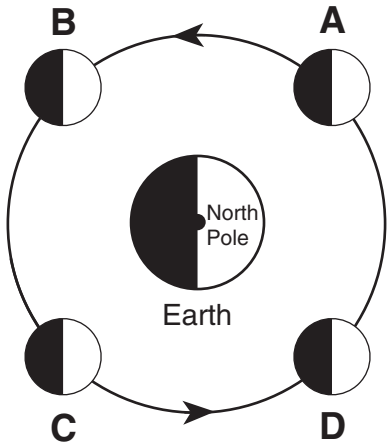


(Not drawn to scale)



(Not drawn to scale)

Diagram 1



(Not drawn to scale)

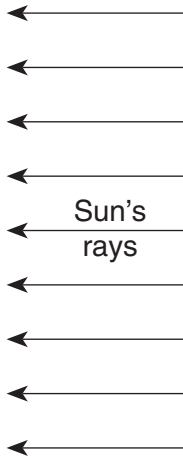
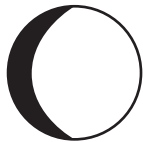
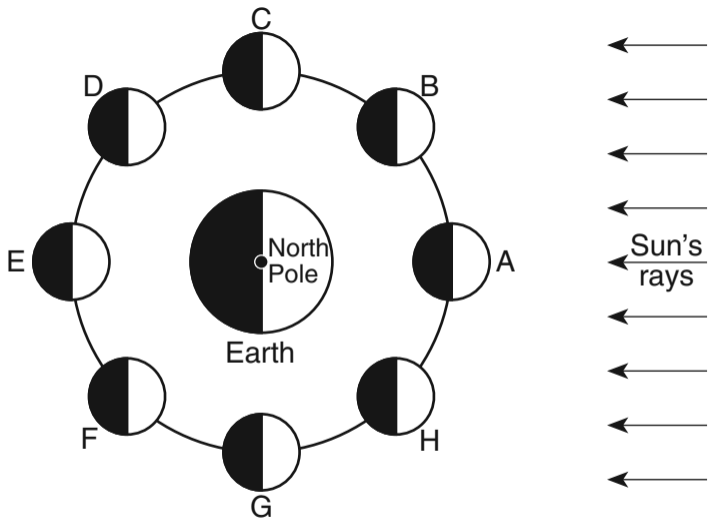


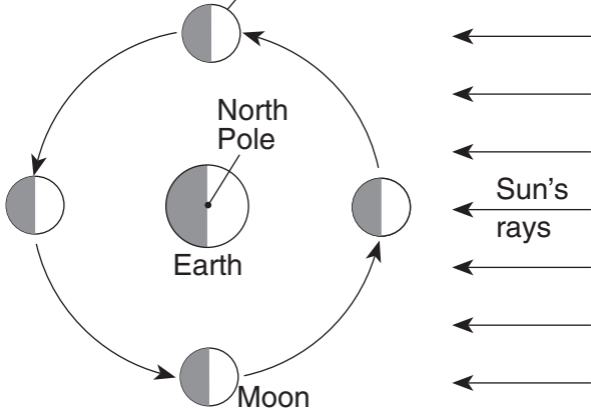
Diagram 2



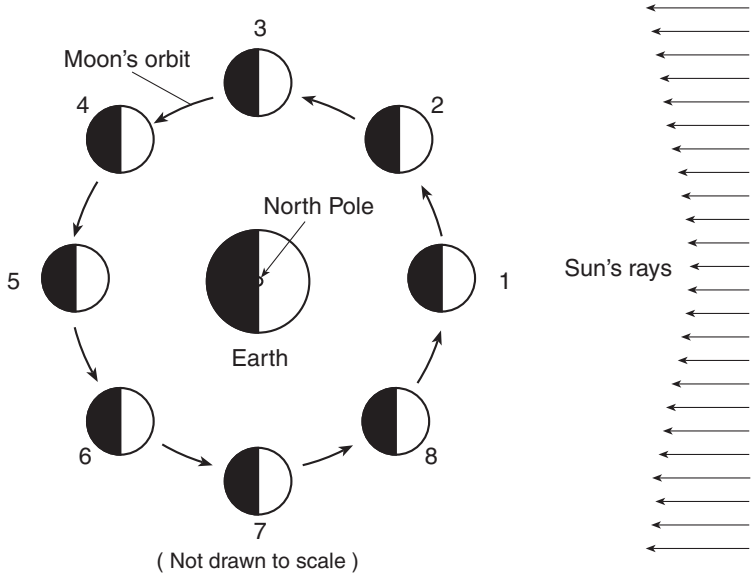


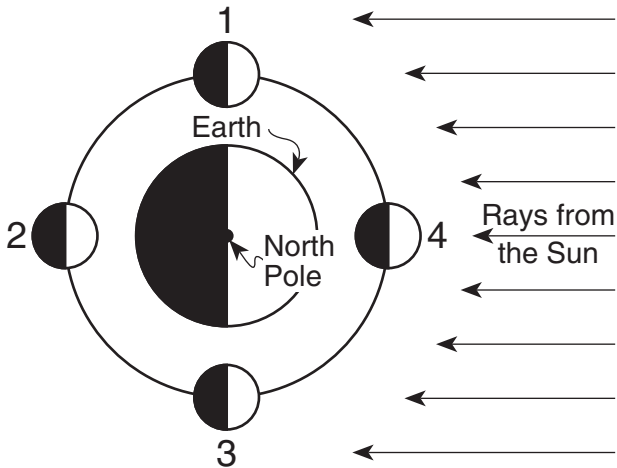
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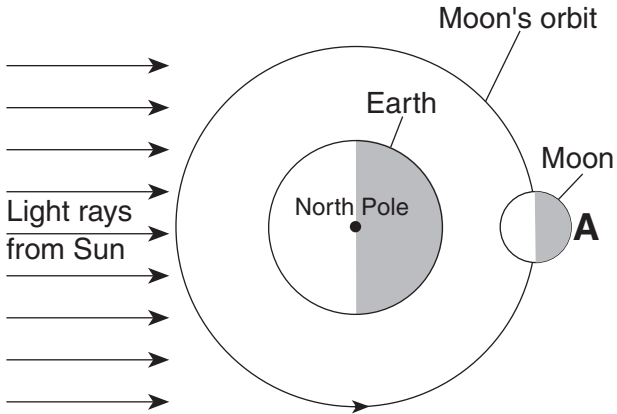
May 10, 2000

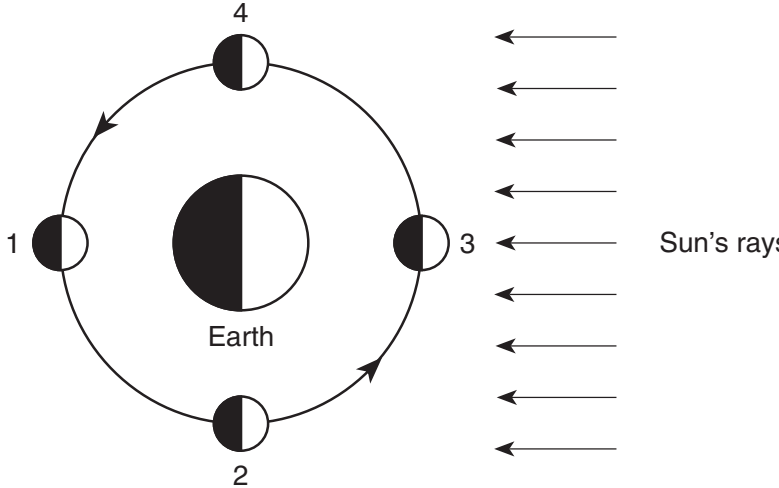


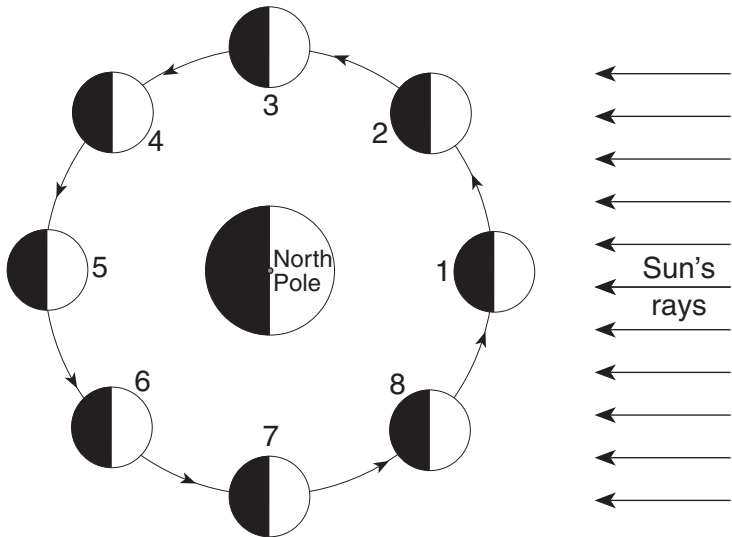
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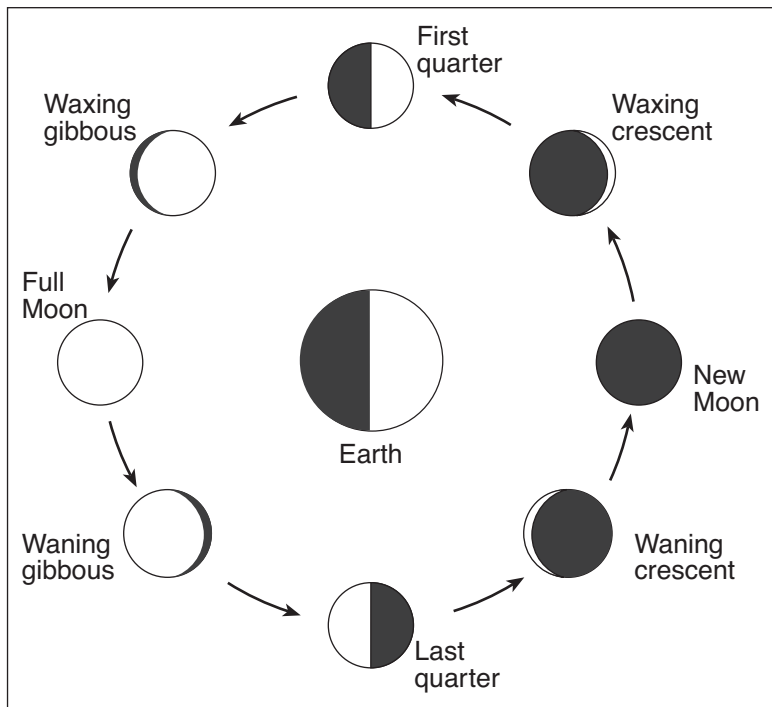


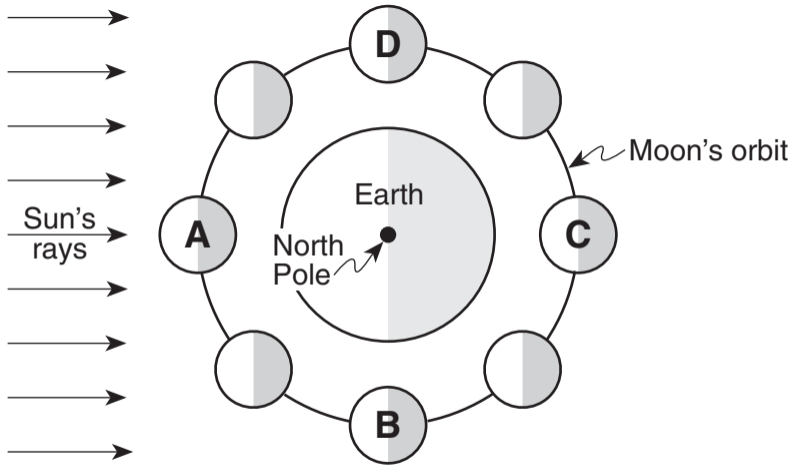




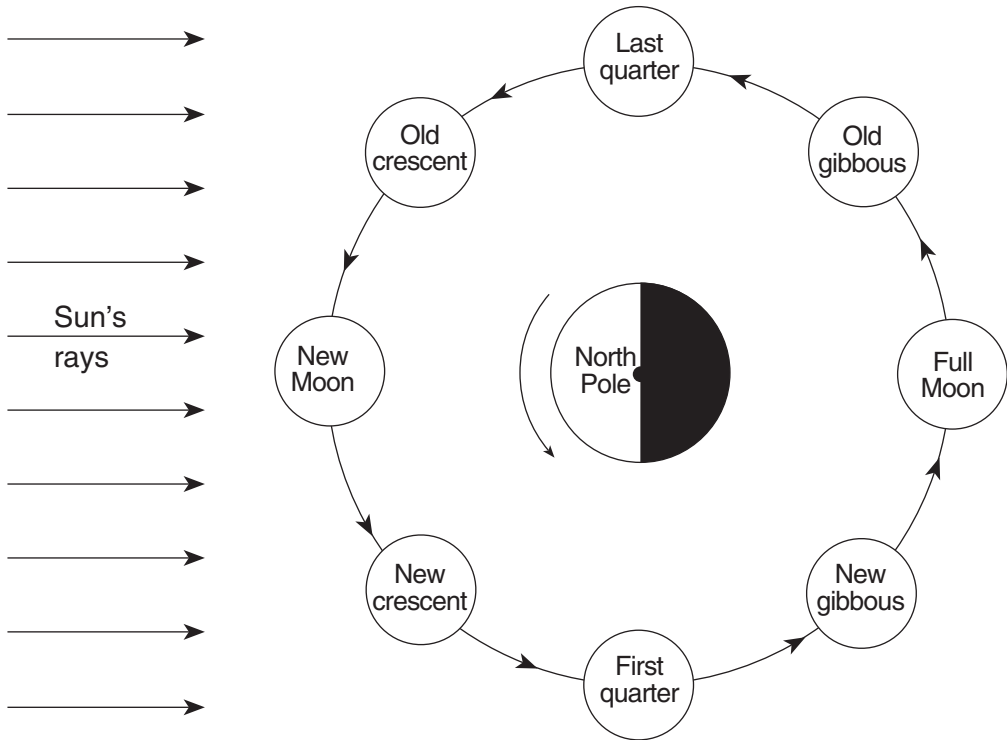


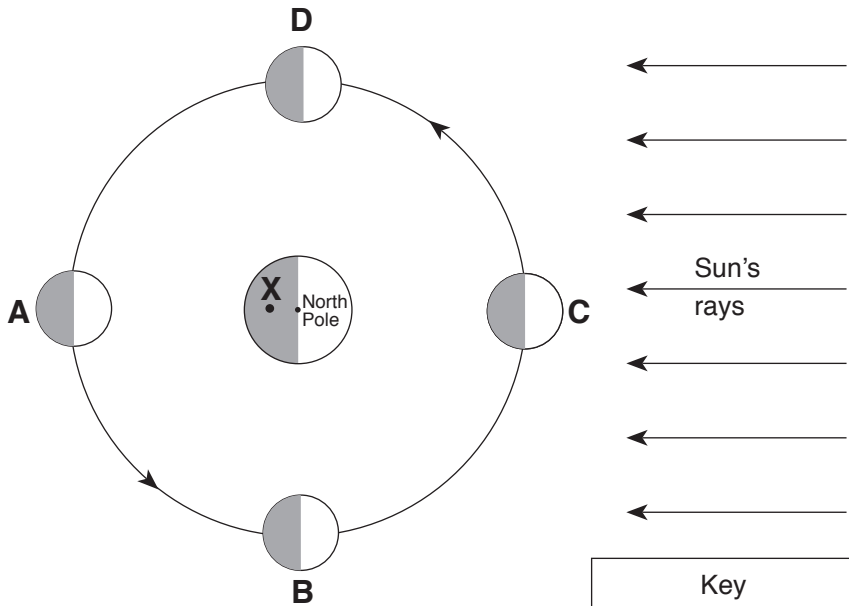








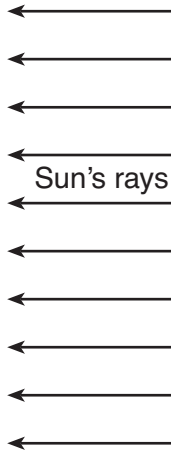
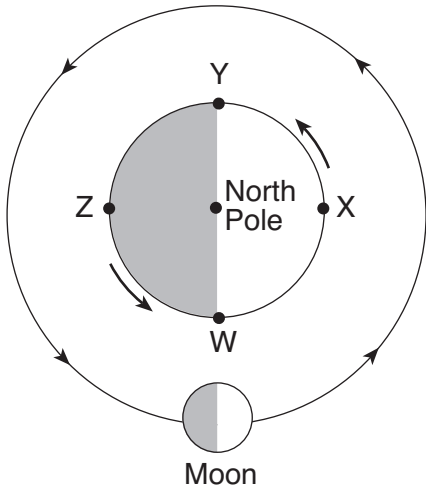
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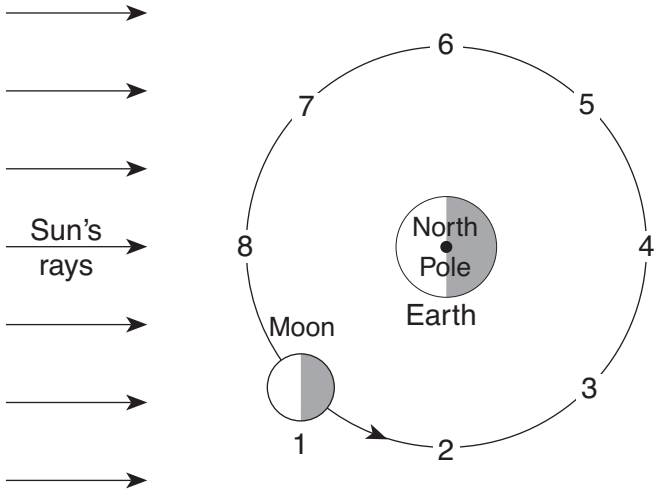


(Not drawn to scale)

Key	
	Lighted side
	Dark side

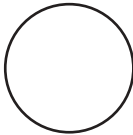


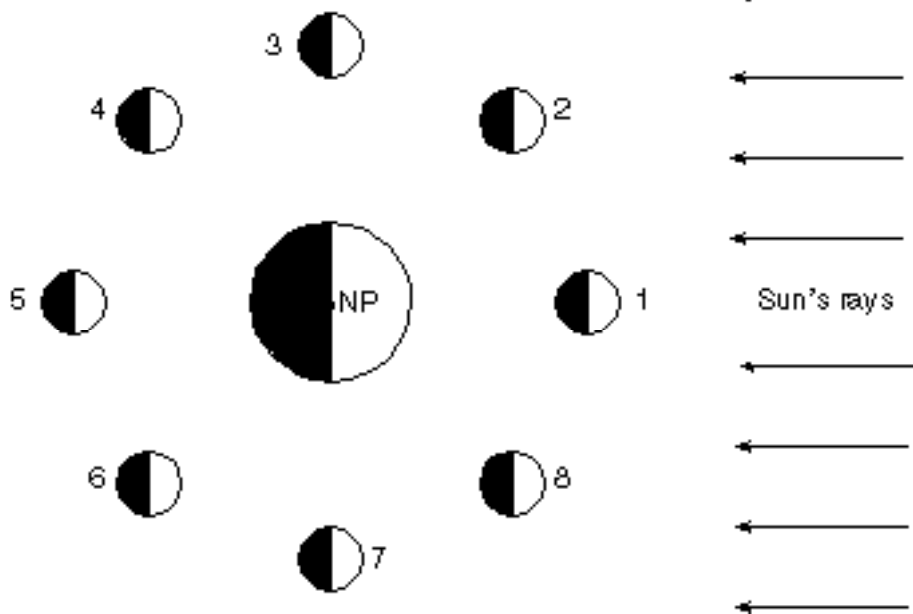
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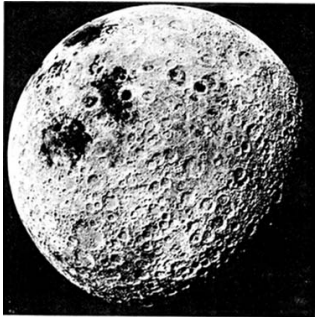
(Not drawn to scale)

Date	Percentage of Lighted Side of the Moon Visible From Earth (%)
July 1	1
July 2	5
July 3	10
July 4	17
July 5	26
July 6	37
July 7	48
July 8	59
July 9	70
July 10	80
July 11	89
July 12	95
July 13	98
July 14	100

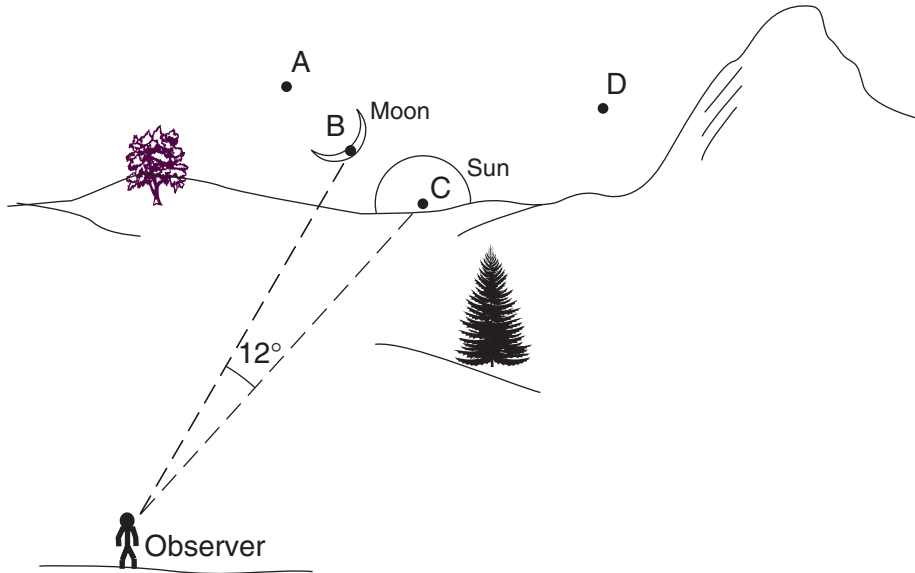














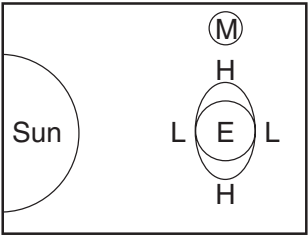
S



M



E



Sun

M

H

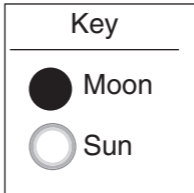
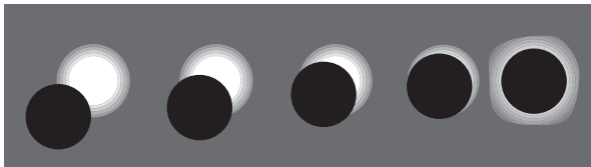
E

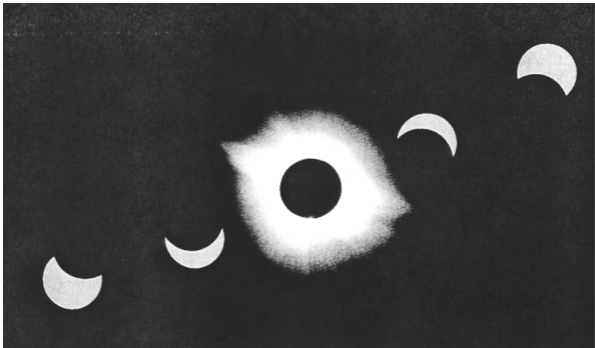
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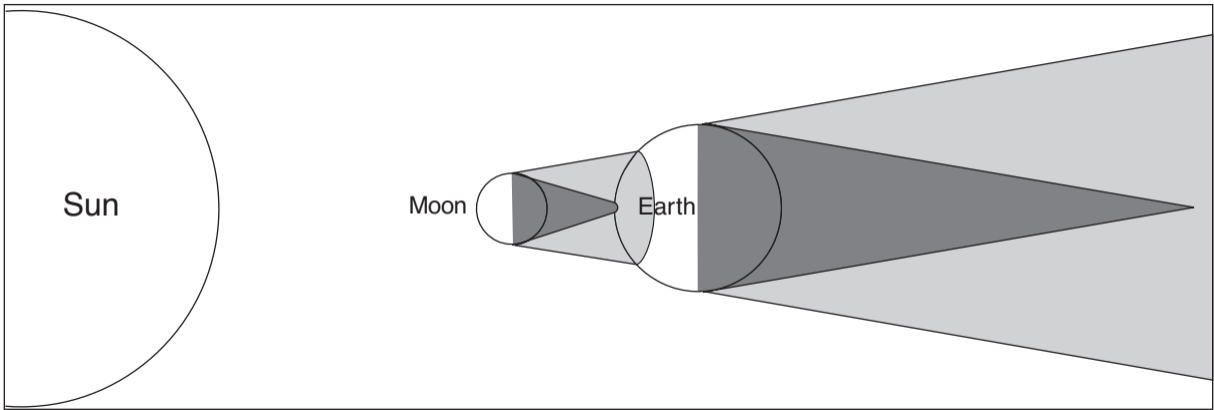
L

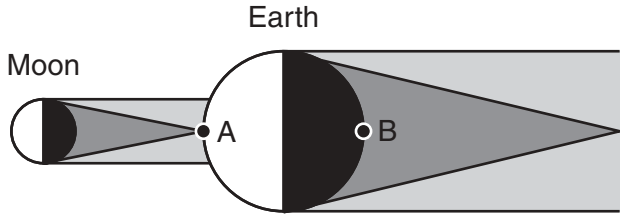
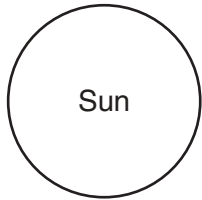
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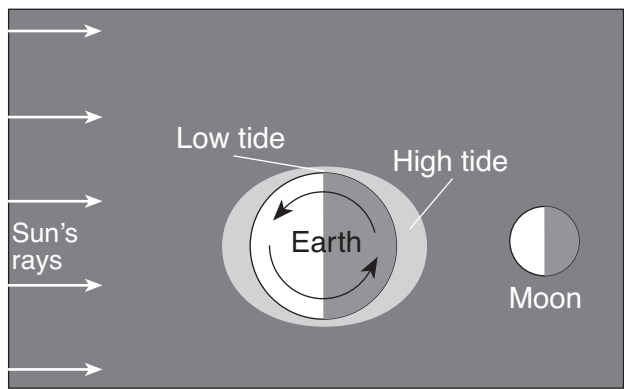








(Not drawn to scale)



Low tide

High tide

Sun's rays

Earth

Moon



S



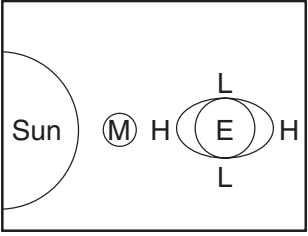
M

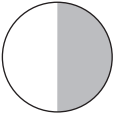


E





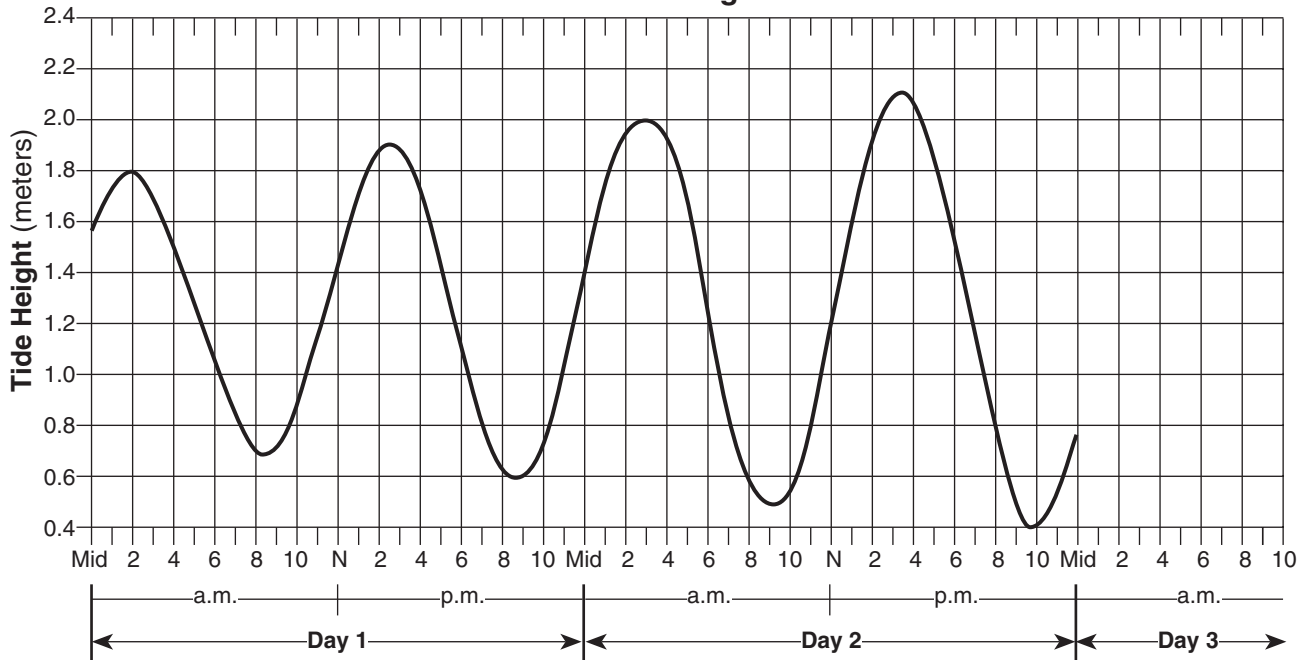




Hopewell Cape Tide Table, August 2005

Date	Time	Tide Height (m)
21	1:28 a.m.	14.0
21	8:03 a.m.	-0.1
21	1:54 p.m.	13.7
21	8:26 p.m.	0.0
22	2:20 a.m.	14.0
22	8:52 a.m.	-0.2
22	2:46 p.m.	13.8
22	9:16 p.m.	0.0

Tidal Changes



Tidal Changes

