

MOON'S PHASES.	D.	Toronto.		Quebec.		Twilight or Daylight begins and ends at—											
						Toronto.				Halifax.				Montreal.			
						Beg. End		Beg. End		Beg. End		Beg. End		Beg. End		Beg. End	
		h m		h m		A. M. P. M.		A. M. P. M.		A. M. P. M.		A. M. P. M.		A. M. P. M.		A. M. P. M.	
☉ New Moon		5 51 mo		5 51 mo													
☾ First Quarter ...	12	8 54 ev		9 27 ev		h m		h m		h m		h m		h m		h m	
☾ Full Moon	20	4 23 ev		4 55 ev		15 39 6		48 5 39 6		48 5 49 6		47 5 41 6		47 5 41 6		47 5 41 6	
☾ Last Quarter ...	28	8 24 ev		8 56 ev		10 5 29 6		59 5 30 6		59 5 30 6		59 5 30 6		59 5 30 6		59 5 30 6	
☾ Perigee	7	9 21 mo		9 53 mo		20 5 14 7		14 5 16 7		12 5 16 7		12 5 16 7		12 5 16 7		12 5 16 7	
☾ Apogee	22	1 45 ev		2 17 ev		28 5 27 22 5		27 22 5		27 23 5		27 22 5		17 25 5		0 7 25	

Ephemeris of the Planets, &c.

Day Mo.	Venus South Morn.	Mars South Morn.	Jupiter South Even.	Saturn South Even.	Sun's Longi- tude.	Sun's Right Ascen.	Venus Right Ascen.	Mars Right Ascen.	Jupiter Right Ascen.	Saturn Right Ascen.	Venus Decl. South.	Mars Decl. South.	Jupiter Decl. South.	Saturn Decl. North.
	h m	h m	h m	h m	° ' "	h m	h m	h m	h m	h m	° ' "	° ' "	° ' "	° ' "
1 ...	9 19	4 30	1 51	8 46	312	6 20 58	18 3 13	14 22 39	5 32	21 43	4 52	9 40	22 12	22 12
7 ...	9 26	4 12	1 35	8 22	318	11 21 23	18 31 13	18 22 41	5 31	21 49	5 15	9 40	22 12	22 12
13 ...	9 31	3 52	1 17	7 57	324	15 21 46	19 5 13	22 22 49	5 30	21 33	5 31	8 37	22 13	22 13
19 ...	9 41	3 30	1 2	7 31	330	18 22 10	19 36 13	21 22 54	5 30	20 51	5 39	8 4	22 14	22 14
25 ...	9 48	3 7	0 41	7 10	336	20 22 35	20 7 13	25 23 0	5 30	19 51	5 39	7 31	22 15	22 15
29 ...	9 52	2 51	0 28	6 51	340	21 22 47	20 27 13	24 23 3	5 30	19 2	5 34	7 9	22 16	22 16

Day of Month.	Day of Week.	Calendar for Upper Canada and Nova Scotia.						Calendar for Lower Canada and New Brunswick.						DEPARTMENT FOR ALL OF UPPER AND LOWER CANADA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Sun Rises.			Sun Sets.			Moon Rises.			Sun Rises.			Sun Sets.			Moon Rises.			Pole Star in Meridian Evening.				Shadow at Noon Mark Evening.				Min's Age Noon.				Moon's Place at 7 P. M.				Sun's Declination South.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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PROB. 14.—A loaf of bread in the shape of a hemisphere of radius $9=a$, is to be baked until it is half crust, which must be of the same thickness top and bottom. How thick will it be?

PROB. 15.—Required the dimensions of the strongest rectangular beam that can be sawed from a log 4 feet in diameter.

PROB. 16.—A bar of iron of uniform dimen-

sions, weighing 300 lbs., is fastened to a vertical wall at one end by a hook, the other end being attached to a pulley fixed in a horizontal line with the hook, and at a distance from it equal to the length of the bar. If the pulley rope have a weight of 100 lbs. attached to it, what angle of inclination to the horizon will the bar take?