

MOON'S PHASES.	D.	Toronto.	Quebec.	Twilight or Daylight begins and ends at—											
				Toronto.			Halifax.			Montreal.			Fredric'n.		
				Beg.	End	Days.	Beg.	End	Days.	Beg.	End	Days.	Beg.	End	Days.
		<i>h m</i>	<i>h m</i>	A. M.	P. M.		A. M.	P. M.		A. M.	P. M.		A. M.	P. M.	
☾ New Moon	5	0 35 mo	1 8 mo												
☾ First Quarter ...	11	11 35 ev	0 7 ev	<i>h m h m</i>	<i>h m h m</i>		<i>h m h m</i>	<i>h m h m</i>		<i>h m h m</i>	<i>h m h m</i>		<i>h m h m</i>	<i>h m h m</i>	
☾ Full Moon	20	3 56 mo	4 29 mo	1 14	1 8	0 3	57 8	9 3	56 8	11 3	55 8	13 3	32 8	12	
☾ Last Quarter ...	27	6 9 ev	6 41 ev	10 3	42 8	20 3	39 3	23 3	36 8	27 3	34 8	29 3	31 8	30	
☾ Perigee	4	7 21 mo	4 53 mo	20 3	21 8	36 3	17 3	40 3	19 8	39 3	10 8	47 3	6 8	52	
☾ Apogee	16	11 27 ev	11 59 ev	30 3	0 8	54 2	1 5	59 2	2 56 8	58 2	47 9	7 2	46 9	15	

Ephemeris of the Planets, &c

Day Mo.	Venus South Morn.	Mars South Morn.	Jupit'r South Morn.	Satur'n South Even.	Sun's Longi-tude.	Sun's Right Ascen.	Venus Right Ascen.	Mars Right Ascen.	Jupit'r Right Ascen.	Satur'n Right Ascen.	Venus Decl. South.	Mars Decl. South.	Jupit'r Decl. South.	Satur'n Decl. North.
	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>° /</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>
1 ...	10 20	0 15	10 51	4 54	12 10	0 45	23 0	12 54	23 32	5 36	7 43	2 44	4 11	22 26
7 ...	10 24	Even.	10 33	4 32	18 4	1 7	23 28	12 44	23 37	5 38	5 0	1 53	3 38	22 28
13 ...	10 27	11 5	10 14	4 11	23 57	1 29	23 55	12 35	23 42	5 40	2 11	1 14	3 6	22 30
19 ...	10 30	10 34	9 55	3 50	29 49	1 51	0 22	12 28	23 47	5 42	N 40	0 41	2 35	22 32
25 ...	10 34	10 4	9 36	3 28	35 39	2 13	0 49	12 22	23 52	5 44	3 32	0 18	2 16	22 34
30 ...	10 37	9 41	9 21	3 11	40 30	2 32	1 12	12 18	23 56	5 47	5 54	0 7	1 46	22 36

Day of Month.	Day of Week.	Day of Year.	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.	Mn's Age Noon.	Moon South. Morn.	Moon's Place at 7 P. M.	Sun's Declination North.				
			<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m</i>	<i>h m s</i>	<i>h m s</i>	<i>days</i>	<i>h m s</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>	<i>° /</i>
1	Tuesd.	92	5 41	6 27	4 18	5 44	6 24	4 25	0 24	37 12	3 47	25.9	8 59	♊ 27	4 48	45		
2	Wed.	93	5 39	6 28	4 37	5 43	6 25	4 42	0 20	41 12	3 29	26.9	9 53	♊ 12	5 11	47		
3	Thurs.	94	5 37	6 29	4 53	5 42	6 26	4 55	0 16	45 12	3 11	27.9	10 45	do. 27	5 34	45		
4	Friday	95	5 36	6 30	5 09	5 40	6 27	5 08	0 12	50 12	2 53	28.9	11 37	♋ 12	5 57	36		
5	Satur.	96	5 34	6 32	5 23	5 38	6 28	5 26	0 8	54 12	2 36	0.5	Ev. 29	do. 27	6 20	21		
6	SUND.	97	5 32	6 33	5 43	5 35	6 29	5 49	0 4	58 12	2 18	1.5	1 22	♋ 12	6 43	0		
7	Mond.	98	5 30	6 34	6 00	5 33	6 30	6 08	0 1	2 12	2 1	2.5	2 17	do. 26	7 5	32		
8	Tuesd.	99	5 28	6 36	6 11	5 32	6 32	6 28	Morning.	12 1	44	3.5	3 14	♋ 10	7 27	56		
9	Wed.	100	5 26	6 37	Morn.	5 30	6 34	Morn.	11 53	10 12	1 28	4.5	4 13	do. 24	7 50	14		
10	Thur.	101	5 24	6 38	45	5 28	6 35	57	11 49	14 12	1 11	5.5	5 11	♋ 20	8 12	23		
11	Friday	102	5 23	6 39	1 27	5 26	6 36	1 39	11 45	19 12	0 55	6.5	6 7	do. 20	8 34	23		
12	Satur.	103	5 21	6 40	2 14	5 25	6 37	2 24	11 41	23 12	0 39	7.5	6 59	♌ 2	8 56	15		
13	SUND.	104	5 19	6 42	2 51	5 23	6 38	3 0	11 37	27 12	0 24	8.5	7 47	do. 15	9 17	58		
14	Mond.	105	5 18	6 43	3 22	5 21	6 39	3 29	11 33	31 12	0 9	9.5	8 31	do. 27	9 39	31		
15	Tuesd.	106	5 16	6 44	3 44	5 19	6 41	3 50	11 29	36 Morning.	10.5	9 13	♌ 8	10 0	55			
16	Wed.	107	5 14	6 45	4 5	5 18	6 42	4 8	11 25	40 11	59 39	11.5	9 52	do. 20	10 22	9		
17	Thur.	108	5 12	6 47	4 22	5 16	6 44	4 24	11 21	44 11	59 25	12.5	10 31	♌ 17	10 43	12		
18	Friday	109	5 11	6 48	4 39	5 13	6 45	4 39	11 17	48 11	59 11	13.5	11 10	do. 14	11 4	5		
19	Satur.	110	5 9	6 49	Rises	5 11	6 47	Rises.	11 13	53 11	58 58	14.5	11 51	do. 26	11 24	47		
20	SUND.	111	5 7	6 50	7 21	5 10	6 48	7 27	11 9	57 11	58 45	15.5	Morn.	♌ 8	11 45	18		
21	Mond.	112	5 6	6 51	8 28	5 8	6 50	8 36	11 6	21 58	32	16.5	0 34	do. 20	12 5	37		
22	Tuesd.	113	5 4	6 53	9 36	5 6	6 51	9 46	10 2	6 11	58 20	17.5	1 20	♌ 31	12 25	45		
23	Wed.	114	5 3	6 54	10 46	5 4	6 52	10 58	10 58	10 11	58 9	18.5	2 9	do. 15	12 45	40		
24	Thurs.	115	5 1	6 55	11 49	5 3	6 53	Morn.	10 54	15 11	57 57	19.5	3 3	do. 28	13 5	23		
25	Friday	116	4 59	6 56	Morn.	5 2	6 54	1 10	50	19 11	57 47	20.5	3 59	♌ 11	13 24	53		
26	Satur.	117	4 58	6 57	45	5 0	6 56	47	10 46	24 11	57 37	21.5	4 57	do. 24	13 44	10		
27	SUND.	118	4 56	6 59	1 29	4 58	6 58	1 39	10 42	28 11	57 27	22.5	5 54	♌ 8	14 3	13		
28	Mond.	119	4 55	7 0	2 7	4 56	6 58	2 16	10 38	33 11	57 18	23.5	6 50	do. 22	14 22	3		
29	Tuesd.	120	4 53	7 1	2 38	4 55	6 59	2 44	10 34	37 11	57 9	24.5	7 43	♌ 6	14 40	39		
30	Wed.	121	4 52	7 2	3 2	4 54	7 0	3 5	10 30	41 11	57 1	25.5	8 34	do. 21	14 59	0		

PROB. 28.—A ladder 100 feet long, of uniform thickness, weighs 100 lbs., and bears against a vertical building at an angle of 60° to the horizon. If a person weighing 150 lbs. ascends it 40 feet, what will be the pressure at the top, and thrust at the bottom of it?

PROB. 29.—Each side of a pentagon is 20.

Required its circumscribed, and largest inscribed equilateral triangle.

PROB. 30.—The sides of a pentagon are 12 each. Required the greatest and least diameter, the distances of the centre from the vertices, and from the middle of each side, and the longest and shortest chord, also the area.