

Correction de minutes

Calcul pour la Latitude $45,4^\circ$ et longitude $-74,03$ UTC-5 pour le 01-01

Correction de minutes pour la latitude

Nous calculerons la proportion réelle de notre latitude entre 45° et 50° . Puisque ces latitudes sont distantes de 5° , et que ma latitude est de $0,4^\circ (45,4^\circ - 40^\circ)$ de 40° vers 45° , la proportion réelle est :

$$0,4^\circ / 5^\circ = 0,08$$

La différence entre le 45° et 50° : $7:58:31 - 7:38:17 = +20 \text{ m } 14\text{s} = 20,23$ ($14/60 = 0.23$)

On additionne si le résultat est positif, on soustrait si le résultat est négatif.

Nous multiplions 0,08 par 20.23:

$$0,08 \times 20,57\text{m} = 1,62 \text{ m} = 1\text{m } 37\text{s} \quad (0.65 * 62 = 37,2)$$

Puis on additionne le résultat de l'heure à 45° pour le 01-01, soit $7:38:17$:

$$7:38:17 + 1\text{m } 37\text{s} = \mathbf{07:39:55 \text{ (correction pour la latitude)}}$$

Correction de minutes pour la longitude

$74,03$ pour notre exemple, $74^\circ 2'$ ($0.03 \times 60 = 1,8$)

Avec le tableau Conversion of Arc to Time (appelé Conversion d'arc en temps) qui vous permet de rechercher l'heure à partir de cette longitude :

$$74^\circ 2' = 4\text{h } 56 \text{ m}, 2 \text{ minutes} = 8\text{s}$$

Ajoutez $4\text{h } 56 \text{ m } 8\text{s}$ à $\mathbf{07:39:55 \text{ (correction pour la latitude)}}$

$$07:39:55 + 4:56:08 = 12:36:03$$

On a addition ou on soustrait notre UTC (-5 dans notre exemple)

$$12:36:03 - 5 = \mathbf{07:36:03 = \text{l'heure corrigée}}$$

Conversion of Arc to Time

0° - 59°			60° - 119°			120° - 179°			180° - 239°			240° - 299°			300° - 360°			0' - 59'			0" - 59"	
°	h	m	°	h	m	°	h	m	°	h	m	°	h	m	°	h	m	'	m	s	"	s
0	0	00	60	4	00	120	8	00	180	12	00	240	16	00	300	20	00	0	0	00	0	0.00
1	0	04	61	4	04	121	8	04	181	12	04	241	16	04	301	20	04	1	0	04	1	0.07
2	0	08	62	4	08	122	8	08	182	12	08	242	16	08	302	20	08	2	0	08	2	0.13
3	0	12	63	4	12	123	8	12	183	12	12	243	16	12	303	20	12	3	0	12	3	0.20
4	0	16	64	4	16	124	8	16	184	12	16	244	16	16	304	20	16	4	0	16	4	0.27
5	0	20	65	4	20	125	8	20	185	12	20	245	16	20	305	20	20	5	0	20	5	0.33
6	0	24	66	4	24	126	8	24	186	12	24	246	16	24	306	20	24	6	0	24	6	0.40
7	0	28	67	4	28	127	8	28	187	12	28	247	16	28	307	20	28	7	0	28	7	0.47
8	0	32	68	4	32	128	8	32	188	12	32	248	16	32	308	20	32	8	0	32	8	0.53
9	0	36	69	4	36	129	8	36	189	12	36	249	16	36	309	20	36	9	0	36	9	0.60
10	0	40	70	4	40	130	8	40	190	12	40	250	16	40	310	20	40	10	0	40	10	0.67
11	0	44	71	4	44	131	8	44	191	12	44	251	16	44	311	20	44	11	0	44	11	0.73
12	0	48	72	4	48	132	8	48	192	12	48	252	16	48	312	20	48	12	0	48	12	0.80
13	0	52	73	4	52	133	8	52	193	12	52	253	16	52	313	20	52	13	0	52	13	0.87
14	0	56	74	4	56	134	8	56	194	12	56	254	16	56	314	20	56	14	0	56	14	0.93
15	1	00	75	5	00	135	9	00	195	13	00	255	17	00	315	21	00	15	1	00	15	1.00
16	1	04	76	5	04	136	9	04	196	13	04	256	17	04	316	21	04	16	1	04	16	1.07
17	1	08	77	5	08	137	9	08	197	13	08	257	17	08	317	21	08	17	1	08	17	1.13
18	1	12	78	5	12	138	9	12	198	13	12	258	17	12	318	21	12	18	1	12	18	1.20
19	1	16	79	5	16	139	9	16	199	13	16	259	17	16	319	21	16	19	1	16	19	1.27
20	1	20	80	5	20	140	9	20	200	13	20	260	17	20	320	21	20	20	1	20	20	1.33
21	1	24	81	5	24	141	9	24	201	13	24	261	17	24	321	21	24	21	1	24	21	1.40
22	1	28	82	5	28	142	9	28	202	13	28	262	17	28	322	21	28	22	1	28	22	1.47
23	1	32	83	5	32	143	9	32	203	13	32	263	17	32	323	21	32	23	1	32	23	1.53
24	1	36	84	5	36	144	9	36	204	13	36	264	17	36	324	21	36	24	1	36	24	1.60
25	1	40	85	5	40	145	9	40	205	13	40	265	17	40	325	21	40	25	1	40	25	1.67
26	1	44	86	5	44	146	9	44	206	13	44	266	17	44	326	21	44	26	1	44	26	1.73
27	1	48	87	5	48	147	9	48	207	13	48	267	17	48	327	21	48	27	1	48	27	1.80
28	1	52	88	5	52	148	9	52	208	13	52	268	17	52	328	21	52	28	1	52	28	1.87
29	1	56	89	5	56	149	9	56	209	13	56	269	17	56	329	21	56	29	1	56	29	1.93
30	2	00	90	6	00	150	10	00	210	14	00	270	18	00	330	22	00	30	2	00	30	2.00
31	2	04	91	6	04	151	10	04	211	14	04	271	18	04	331	22	04	31	2	04	31	2.07
32	2	08	92	6	08	152	10	08	212	14	08	272	18	08	332	22	08	32	2	08	32	2.13
33	2	12	93	6	12	153	10	12	213	14	12	273	18	12	333	22	12	33	2	12	33	2.20
34	2	16	94	6	16	154	10	16	214	14	16	274	18	16	334	22	16	34	2	16	34	2.27
35	2	20	95	6	20	155	10	20	215	14	20	275	18	20	335	22	20	35	2	20	35	2.33
36	2	24	96	6	24	156	10	24	216	14	24	276	18	24	336	22	24	36	2	24	36	2.40
37	2	28	97	6	28	157	10	28	217	14	28	277	18	28	337	22	28	37	2	28	37	2.47
38	2	32	98	6	32	158	10	32	218	14	32	278	18	32	338	22	32	38	2	32	38	2.53
39	2	36	99	6	36	159	10	36	219	14	36	279	18	36	339	22	36	39	2	36	39	2.60
40	2	40	100	6	40	160	10	40	220	14	40	280	18	40	340	22	40	40	2	40	40	2.67
41	2	44	101	6	44	161	10	44	221	14	44	281	18	44	341	22	44	41	2	44	41	2.73
42	2	48	102	6	48	162	10	48	222	14	48	282	18	48	342	22	48	42	2	48	42	2.80
43	2	52	103	6	52	163	10	52	223	14	52	283	18	52	343	22	52	43	2	52	43	2.87
44	2	56	104	6	56	164	10	56	224	14	56	284	18	56	344	22	56	44	2	56	44	2.93
45	3	00	105	7	00	165	11	00	225	15	00	285	19	00	345	23	00	45	3	00	45	3.00
46	3	04	106	7	04	166	11	04	226	15	04	286	19	04	346	23	04	46	3	04	46	3.07
47	3	08	107	7	08	167	11	08	227	15	08	287	19	08	347	23	08	47	3	08	47	3.13
48	3	12	108	7	12	168	11	12	228	15	12	288	19	12	348	23	12	48	3	12	48	3.20
49	3	16	109	7	16	169	11	16	229	15	16	289	19	16	349	23	16	49	3	16	49	3.27
50	3	20	110	7	20	170	11	20	230	15	20	290	19	20	350	23	20	50	3	20	50	3.33
51	3	24	111	7	24	171	11	24	231	15	24	291	19	24	351	23	24	51	3	24	51	3.40
52	3	28	112	7	28	172	11	28	232	15	28	292	19	28	352	23	28	52	3	28	52	3.47
53	3	32	113	7	32	173	11	32	233	15	32	293	19	32	353	23	32	53	3	32	53	3.53
54	3	36	114	7	36	174	11	36	234	15	36	294	19	36	354	23	36	54	3	36	54	3.60
55	3	40	115	7	40	175	11	40	235	15	40	295	19	40	355	23	40	55	3	40	55	3.67
56	3	44	116	7	44	176	11	44	236	15	44	296	19	44	356	23	44	56	3	44	56	3.73
57	3	48	117	7	48	177	11	48	237	15	48	297	19	48	357	23	48	57	3	48	57	3.80
58	3	52	118	7	52	178	11	52	238	15	52	298	19	52	358	23	52	58	3	52	58	3.87
59	3	56	119	7	56	179	11	56	239	15	56	299	19	56	359	23	56	59	3	56	59	3.93
60	4	00	120	8	00	180	12	00	240	16	00	300	20	00	360	24	00	60	4	00	60	4.00

h= hours of time m= minutes of time s = seconds of time ' = minutes of arc " = seconds of arc

Temps moyen de Greenwich (GMT) UTC 0 Latitude N

	0°		10°		20°		30°		35°		40°		45°		50°	
Date	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher
01-01-23	7:58:31	16:08:22	8:08:08	15:58:45	8:18:56	15:47:57	8:31:13	15:35:40	8:45:27	15:21:26	9:02:19	15:04:35	9:22:57	14:43:57	9:49:36	14:17:18
02-01-23	7:58:26	16:09:23	8:08:00	15:59:50	8:18:44	15:49:06	8:30:57	15:36:53	8:45:04	15:22:45	9:01:48	15:06:02	9:22:14	14:45:35	9:48:34	14:19:16
03-01-23	7:58:18	16:10:27	8:07:49	16:00:57	8:18:28	15:50:17	8:30:36	15:38:10	8:44:37	15:24:08	9:01:12	15:07:34	9:21:26	14:47:19	9:47:25	14:21:20
04-01-23	7:58:07	16:11:33	8:07:34	16:02:06	8:18:09	15:51:31	8:30:11	15:39:29	8:44:05	15:25:35	9:00:30	15:09:10	9:20:31	14:49:09	9:46:09	14:23:31
05-01-23	7:57:53	16:12:41	8:07:15	16:03:19	8:17:45	15:52:48	8:29:41	15:40:53	8:43:28	15:27:06	8:59:44	15:10:50	9:19:31	14:51:03	9:44:47	14:25:47
06-01-23	7:57:36	16:13:51	8:06:54	16:04:34	8:17:19	15:54:08	8:29:08	15:42:19	8:42:47	15:28:40	8:58:53	15:12:34	9:18:26	14:53:01	9:43:18	14:28:09
07-01-23	7:57:15	16:15:04	8:06:28	16:05:51	8:16:48	15:55:31	8:28:31	15:43:48	8:42:02	15:30:17	8:57:57	15:14:22	9:17:15	14:55:04	9:41:43	14:30:36
08-01-23	7:56:52	16:16:19	8:06:00	16:07:10	8:16:14	15:56:56	8:27:50	15:45:20	8:41:13	15:31:58	8:56:56	15:16:14	9:15:58	14:57:12	9:40:02	14:33:08
09-01-23	7:56:25	16:17:36	8:05:29	16:08:32	8:15:37	15:58:24	8:27:06	15:46:55	8:40:19	15:33:42	8:55:51	15:18:09	9:14:37	14:59:24	9:38:16	14:35:45
10-01-23	7:55:56	16:18:54	8:04:54	16:09:56	8:14:56	15:59:54	8:26:17	15:48:33	8:39:21	15:35:28	8:54:42	15:20:08	9:13:11	15:01:39	9:36:24	14:38:26
11-01-23	7:55:23	16:20:15	8:04:16	16:11:22	8:14:11	16:01:27	8:25:25	15:50:13	8:38:20	15:37:18	8:53:28	15:22:10	9:11:40	15:03:58	9:34:27	14:41:11
12-01-23	7:54:48	16:21:37	8:03:34	16:12:50	8:13:23	16:03:01	8:24:29	15:51:55	8:37:14	15:39:11	8:52:09	15:24:16	9:10:04	15:06:20	9:32:26	14:43:59
13-01-23	7:54:09	16:23:01	8:02:50	16:14:20	8:12:32	16:04:38	8:23:30	15:53:40	8:36:05	15:41:06	8:50:47	15:26:24	9:08:24	15:08:46	9:30:19	14:46:51
14-01-23	7:53:28	16:24:27	8:02:03	16:15:52	8:11:38	16:06:17	8:22:27	15:55:28	8:34:52	15:43:03	8:49:21	15:28:34	9:06:40	15:11:15	9:28:09	14:49:46
15-01-23	7:52:44	16:25:54	8:01:13	16:17:26	8:10:40	16:07:58	8:21:21	15:57:17	8:33:35	15:45:03	8:47:50	15:30:48	9:04:52	15:13:46	9:25:54	14:52:44
16-01-23	7:51:57	16:27:23	8:00:19	16:19:01	8:09:40	16:09:40	8:20:12	15:59:08	8:32:14	15:47:05	8:46:16	15:33:04	9:02:59	15:16:21	9:23:35	14:55:45
17-01-23	7:51:07	16:28:53	7:59:23	16:20:37	8:08:36	16:11:25	8:18:59	16:01:02	8:30:51	15:49:10	8:44:38	15:35:22	9:01:03	15:18:57	9:21:12	14:58:48
18-01-23	7:50:15	16:30:25	7:58:24	16:22:15	8:07:29	16:13:11	8:17:43	16:02:57	8:29:23	15:51:16	8:42:57	15:37:42	8:59:03	15:21:36	9:18:46	15:01:53
19-01-23	7:49:20	16:31:57	7:57:22	16:23:55	8:06:19	16:14:58	8:16:24	16:04:54	8:27:53	15:53:24	8:41:13	15:40:05	8:57:00	15:24:17	9:16:17	15:05:00
20-01-23	7:48:22	16:33:31	7:56:18	16:25:36	8:05:07	16:16:47	8:15:01	16:06:52	8:26:19	15:55:34	8:39:25	15:42:29	8:54:53	15:27:00	9:13:44	15:08:09
21-01-23	7:47:22	16:35:06	7:55:10	16:27:18	8:03:51	16:18:37	8:13:36	16:08:52	8:24:43	15:57:45	8:37:33	15:44:55	8:52:43	15:29:45	9:11:08	15:11:20
22-01-23	7:46:19	16:36:42	7:54:00	16:29:01	8:02:33	16:20:28	8:12:08	16:10:53	8:23:03	15:59:58	8:35:39	15:47:22	8:50:30	15:32:31	9:08:29	15:14:32
23-01-23	7:45:14	16:38:19	7:52:48	16:30:45	8:01:12	16:22:21	8:10:37	16:12:55	8:21:20	16:02:13	8:33:42	15:49:51	8:48:14	15:35:18	9:05:48	15:17:45
24-01-23	7:44:07	16:39:56	7:51:33	16:32:30	7:59:48	16:24:15	8:09:04	16:14:59	8:19:35	16:04:28	8:31:42	15:52:21	8:45:56	15:38:07	9:03:03	15:21:00
25-01-23	7:42:57	16:41:35	7:50:15	16:34:16	7:58:22	16:26:09	8:07:28	16:17:04	8:17:47	16:06:45	8:29:39	15:54:53	8:43:34	15:40:58	9:00:17	15:24:15
26-01-23	7:41:44	16:43:14	7:48:56	16:36:03	7:56:54	16:28:05	8:05:49	16:19:10	8:15:56	16:09:03	8:27:33	15:57:25	8:41:10	15:43:49	8:57:28	15:27:31
27-01-23	7:40:30	16:44:54	7:47:33	16:37:50	7:55:22	16:30:01	8:04:08	16:21:16	8:14:02	16:11:22	8:25:25	15:59:59	8:38:43	15:46:41	8:54:36	15:30:47
28-01-23	7:39:13	16:46:34	7:46:09	16:39:39	7:53:49	16:31:58	8:02:24	16:23:24	8:12:06	16:13:41	8:23:14	16:02:33	8:36:14	15:49:34	8:51:43	15:34:04
29-01-23	7:37:54	16:48:15	7:44:42	16:41:28	7:52:13	16:33:56	8:00:38	16:25:32	8:10:08	16:16:02	8:21:01	16:05:08	8:33:42	15:52:27	8:48:48	15:37:22
30-01-23	7:36:33	16:49:57	7:43:13	16:43:17	7:50:35	16:35:55	7:58:49	16:27:41	8:08:07	16:18:23	8:18:46	16:07:44	8:31:09	15:55:21	8:45:50	15:40:40
31-01-23	7:35:10	16:51:39	7:41:42	16:45:07	7:48:55	16:37:54	7:56:59	16:29:50	8:06:04	16:20:44	8:16:28	16:10:21	8:28:33	15:58:16	8:42:51	15:43:58

Temps moyen de Greenwich (GMT) UTC 0 Latitude N

	0°		10°		20°		30°		35°		40°		45°		50°	
Date	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher
01-02-23	7:33:45	16:53:21	7:40:09	16:46:57	7:47:13	16:39:53	7:55:06	16:32:00	8:03:59	16:23:07	8:14:08	16:12:58	8:25:55	16:01:11	8:39:50	15:47:16
02-02-23	7:32:18	16:55:04	7:38:33	16:48:48	7:45:28	16:41:53	7:53:11	16:34:11	8:01:52	16:25:29	8:11:47	16:15:35	8:23:15	16:04:06	8:36:48	15:50:34
03-02-23	7:30:49	16:56:47	7:36:56	16:50:39	7:43:42	16:43:53	7:51:14	16:36:21	7:59:43	16:27:53	8:09:23	16:18:13	8:20:33	16:07:02	8:33:43	15:53:52
04-02-23	7:29:18	16:58:30	7:35:17	16:52:30	7:41:54	16:45:54	7:49:15	16:38:33	7:57:32	16:30:16	8:06:57	16:20:51	8:17:50	16:09:58	8:30:38	15:57:10
05-02-23	7:27:45	17:00:13	7:33:36	16:54:22	7:40:03	16:47:55	7:47:14	16:40:44	7:55:18	16:32:40	8:04:29	16:23:29	8:15:05	16:12:53	8:27:31	16:00:28
06-02-23	7:26:11	17:01:57	7:31:53	16:56:14	7:38:11	16:49:56	7:45:11	16:42:56	7:53:04	16:35:04	8:02:00	16:26:07	8:12:18	16:15:49	8:24:22	16:03:45
07-02-23	7:24:34	17:03:40	7:30:09	16:58:06	7:36:17	16:51:57	7:43:07	16:45:07	7:50:47	16:37:28	7:59:29	16:28:46	8:09:30	16:18:45	8:21:12	16:07:02
08-02-23	7:22:56	17:05:24	7:28:23	16:59:58	7:34:22	16:53:58	7:41:01	16:47:19	7:48:28	16:39:52	7:56:56	16:31:24	8:06:40	16:21:40	8:18:01	16:10:19
09-02-23	7:21:17	17:07:07	7:26:35	17:01:50	7:32:25	16:56:00	7:38:53	16:49:31	7:46:08	16:42:16	7:54:22	16:34:02	8:03:48	16:24:36	8:14:49	16:13:35
10-02-23	7:19:36	17:08:51	7:24:45	17:03:42	7:30:26	16:58:01	7:36:44	16:51:43	7:43:47	16:44:40	7:51:46	16:36:41	8:00:56	16:27:31	8:11:36	16:16:51
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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Date	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher	Lever	Coucher
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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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Temps moyen de Greenwich (GMT) UTC 0 Latitude N

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