

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 4h 56 m 8s à **07:39:55 (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
01-01-24	5:59:43	18:06:57	6:16:50	17:49:50	6:35:01	17:31:38	6:55:50	17:10:50	7:07:57	16:58:43	7:21:50	16:44:49	7:38:17	16:28:23	7:58:32	16:08:08
02-01-24	6:00:11	18:07:25	6:17:14	17:50:22	6:35:21	17:32:15	6:56:04	17:11:32	7:08:08	16:59:28	7:21:57	16:45:39	7:38:19	16:29:17	7:58:28	16:09:08
03-01-24	6:00:39	18:07:53	6:17:37	17:50:54	6:35:39	17:32:52	6:56:16	17:12:15	7:08:17	17:00:15	7:22:02	16:46:30	7:38:18	16:30:13	7:58:21	16:10:11
04-01-24	6:01:06	18:08:20	6:18:00	17:51:27	6:35:56	17:33:30	6:56:27	17:12:59	7:08:24	17:01:03	7:22:05	16:47:22	7:38:15	16:31:11	7:58:10	16:11:16
05-01-24	6:01:34	18:08:47	6:18:22	17:51:59	6:36:13	17:34:08	6:56:37	17:13:44	7:08:29	17:01:52	7:22:05	16:48:16	7:38:10	16:32:11	7:57:57	16:12:24
06-01-24	6:02:01	18:09:13	6:18:43	17:52:31	6:36:28	17:34:46	6:56:44	17:14:30	7:08:32	17:02:42	7:22:03	16:49:11	7:38:02	16:33:12	7:57:40	16:13:34
07-01-24	6:02:27	18:09:39	6:19:03	17:53:03	6:36:41	17:35:25	6:56:51	17:15:16	7:08:34	17:03:32	7:21:59	16:50:07	7:37:51	16:34:15	7:57:20	16:14:46
08-01-24	6:02:53	18:10:05	6:19:23	17:53:35	6:36:54	17:36:04	6:56:55	17:16:03	7:08:34	17:04:24	7:21:53	16:51:05	7:37:38	16:35:20	7:56:58	16:16:00
09-01-24	6:03:18	18:10:30	6:19:42	17:54:07	6:37:05	17:36:43	6:56:58	17:16:51	7:08:31	17:05:17	7:21:45	16:52:04	7:37:22	16:36:27	7:56:32	16:17:17
10-01-24	6:03:43	18:10:55	6:19:59	17:54:38	6:37:16	17:37:22	6:56:59	17:17:39	7:08:27	17:06:11	7:21:34	16:53:04	7:37:03	16:37:35	7:56:03	16:18:35
11-01-24	6:04:08	18:11:18	6:20:16	17:55:10	6:37:25	17:38:02	6:56:59	17:18:28	7:08:21	17:07:05	7:21:21	16:54:05	7:36:42	16:38:44	7:55:31	16:19:55
12-01-24	6:04:32	18:11:42	6:20:32	17:55:41	6:37:32	17:38:41	6:56:56	17:19:17	7:08:13	17:08:00	7:21:06	16:55:07	7:36:19	16:39:55	7:54:56	16:21:17
13-01-24	6:04:55	18:12:05	6:20:48	17:56:12	6:37:39	17:39:21	6:56:53	17:20:07	7:08:03	17:08:56	7:20:49	16:56:10	7:35:52	16:41:07	7:54:19	16:22:41
14-01-24	6:05:17	18:12:27	6:21:02	17:56:42	6:37:44	17:40:00	6:56:47	17:20:57	7:07:51	17:09:53	7:20:30	16:57:14	7:35:24	16:42:20	7:53:38	16:24:06
15-01-24	6:05:39	18:12:48	6:21:15	17:57:12	6:37:48	17:40:40	6:56:40	17:21:47	7:07:37	17:10:50	7:20:08	16:58:19	7:34:53	16:43:35	7:52:55	16:25:33
16-01-24	6:06:01	18:13:09	6:21:27	17:57:42	6:37:50	17:41:19	6:56:31	17:22:38	7:07:22	17:11:48	7:19:45	16:59:25	7:34:19	16:44:50	7:52:08	16:27:01
17-01-24	6:06:21	18:13:29	6:21:39	17:58:12	6:37:52	17:41:59	6:56:21	17:23:30	7:07:04	17:12:46	7:19:19	17:00:31	7:33:44	16:46:07	7:51:19	16:28:31
18-01-24	6:06:41	18:13:48	6:21:49	17:58:41	6:37:52	17:42:38	6:56:09	17:24:21	7:06:45	17:13:45	7:18:51	17:01:39	7:33:05	16:47:25	7:50:28	16:30:02
19-01-24	6:07:01	18:14:07	6:21:58	17:59:09	6:37:50	17:43:18	6:55:55	17:25:13	7:06:24	17:14:44	7:18:21	17:02:47	7:32:25	16:48:43	7:49:33	16:31:34
20-01-24	6:07:19	18:14:25	6:22:07	17:59:38	6:37:48	17:43:57	6:55:39	17:26:05	7:06:01	17:15:44	7:17:49	17:03:55	7:31:42	16:50:03	7:48:36	16:33:08
21-01-24	6:07:37	18:14:42	6:22:14	18:00:05	6:37:44	17:44:36	6:55:22	17:26:57	7:05:36	17:16:44	7:17:15	17:05:04	7:30:57	16:51:23	7:47:37	16:34:43
22-01-24	6:07:54	18:14:59	6:22:21	18:00:33	6:37:39	17:45:15	6:55:04	17:27:49	7:05:09	17:17:44	7:16:39	17:06:14	7:30:09	16:52:44	7:46:35	16:36:18
23-01-24	6:08:10	18:15:15	6:22:26	18:00:59	6:37:32	17:45:53	6:54:43	17:28:42	7:04:41	17:18:44	7:16:01	17:07:24	7:29:19	16:54:06	7:45:30	16:37:55
24-01-24	6:08:26	18:15:30	6:22:30	18:01:25	6:37:24	17:46:31	6:54:22	17:29:34	7:04:10	17:19:45	7:15:21	17:08:34	7:28:28	16:55:28	7:44:23	16:39:32
25-01-24	6:08:41	18:15:44	6:22:33	18:01:51	6:37:15	17:47:09	6:53:58	17:30:26	7:03:38	17:20:46	7:14:39	17:09:45	7:27:33	16:56:51	7:43:14	16:41:11
26-01-24	6:08:55	18:15:57	6:22:36	18:02:16	6:37:05	17:47:47	6:53:33	17:31:19	7:03:05	17:21:47	7:13:55	17:10:57	7:26:37	16:58:14	7:42:02	16:42:50
27-01-24	6:09:08	18:16:10	6:22:37	18:02:41	6:36:53	17:48:24	6:53:07	17:32:11	7:02:29	17:22:48	7:13:09	17:12:08	7:25:39	16:59:38	7:40:48	16:44:29
28-01-24	6:09:20	18:16:21	6:22:37	18:03:05	6:36:40	17:49:01	6:52:38	17:33:03	7:01:52	17:23:50	7:12:22	17:13:20	7:24:39	17:01:03	7:39:32	16:46:10
29-01-24	6:09:32	18:16:32	6:22:36	18:03:28	6:36:26	17:49:38	6:52:09	17:33:55	7:01:13	17:24:51	7:11:32	17:14:32	7:23:37	17:02:27	7:38:13	16:47:51
30-01-24	6:09:43	18:16:42	6:22:34	18:03:51	6:36:11	17:50:14	6:51:38	17:34:47	7:00:33	17:25:52	7:10:41	17:15:44	7:22:32	17:03:53	7:36:53	16:49:32
31-01-24	6:09:53	18:16:52	6:22:31	18:04:13	6:35:54	17:50:50	6:51:05	17:35:39	6:59:51	17:26:53	7:09:48	17:16:56	7:21:26	17:05:18	7:35:30	16:51:14

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
01-02-24	6:10:02	18:17:00	6:22:27	18:04:34	6:35:36	17:51:26	6:50:31	17:36:31	6:59:07	17:27:55	7:08:53	17:18:08	7:20:18	17:06:43	7:34:06	16:52:56
02-02-24	6:10:10	18:17:08	6:22:22	18:04:55	6:35:17	17:52:01	6:49:55	17:37:22	6:58:22	17:28:56	7:07:57	17:19:21	7:19:08	17:08:09	7:32:39	16:54:39
03-02-24	6:10:17	18:17:15	6:22:16	18:05:15	6:34:56	17:52:35	6:49:18	17:38:14	6:57:35	17:29:57	7:06:59	17:20:33	7:17:57	17:09:35	7:31:10	16:56:22
04-02-24	6:10:24	18:17:21	6:22:09	18:05:35	6:34:35	17:53:10	6:48:40	17:39:05	6:56:47	17:30:58	7:05:59	17:21:45	7:16:43	17:11:01	7:29:40	16:58:05
05-02-24	6:10:30	18:17:26	6:22:01	18:05:54	6:34:12	17:53:43	6:48:00	17:39:55	6:55:57	17:31:58	7:04:58	17:22:58	7:15:28	17:12:27	7:28:08	16:59:48
06-02-24	6:10:35	18:17:30	6:21:53	18:06:12	6:33:48	17:54:17	6:47:19	17:40:46	6:55:06	17:32:59	7:03:55	17:24:10	7:14:11	17:13:53	7:26:33	17:01:31
07-02-24	6:10:39	18:17:34	6:21:43	18:06:30	6:33:23	17:54:49	6:46:37	17:41:36	6:54:13	17:33:59	7:02:51	17:25:22	7:12:53	17:15:20	7:24:58	17:03:15
08-02-24	6:10:42	18:17:36	6:21:32	18:06:47	6:32:57	17:55:22	6:45:53	17:42:26	6:53:19	17:35:00	7:01:45	17:26:34	7:11:33	17:16:46	7:23:20	17:04:59
09-02-24	6:10:45	18:17:38	6:21:20	18:07:03	6:32:30	17:55:53	6:45:08	17:43:15	6:52:24	17:35:59	7:00:37	17:27:46	7:10:11	17:18:12	7:21:41	17:06:42
10-02-24	6:10:47	18:17:40	6:21:07	18:07:19	6:32:02	17:56:25	6:44:22	17:44:05	6:51:27	17:36:59	6:59:29	17:28:58	7:08:48	17:19:38	7:20:00	17:08:26
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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

	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
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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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05-12-24	5:47:13	17:54:25	6:03:52	17:37:46	6:21:34	17:20:05	6:41:47	16:59:52	6:53:33	16:48:06	7:07:01	16:34:37	7:22:56	16:18:42	7:42:30	15:59:08
06-12-24	5:47:38	17:54:51	6:04:23	17:38:06	6:22:11	17:20:18	6:42:32	16:59:58	6:54:22	16:48:07	7:07:55	16:34:34	7:23:57	16:18:32	7:43:40	15:58:50
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09-12-24	5:48:57	17:56:11	6:05:58	17:39:10	6:24:02	17:21:06	6:44:42	17:00:26	6:56:44	16:48:24	7:10:32	16:34:36	7:26:51	16:18:17	7:46:56	15:58:11
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16-12-24	5:52:14	17:59:29	6:09:38	17:42:06	6:28:06	17:23:37	6:49:16	17:02:28	7:01:35	16:50:08	7:15:44	16:35:59	7:32:29	16:19:14	7:53:09	15:58:34
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18-12-24	5:53:12	18:00:28	6:10:39	17:43:01	6:29:11	17:24:29	6:50:25	17:03:16	7:02:47	16:50:54	7:16:58	16:36:43	7:33:46	16:19:54	7:54:31	15:59:09
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22-12-24	5:55:11	18:02:27	6:12:39	17:44:59	6:31:13	17:26:25	6:52:28	17:05:10	7:04:51	16:52:47	7:19:04	16:38:35	7:35:54	16:21:44	7:56:41	16:00:57
23-12-24	5:55:41	18:02:57	6:13:08	17:45:29	6:31:41	17:26:56	6:52:56	17:05:42	7:05:18	16:53:19	7:19:30	16:39:07	7:36:20	16:22:18	7:57:06	16:01:32
24-12-24	5:56:11	18:03:26	6:13:37	17:46:00	6:32:09	17:27:28	6:53:22	17:06:15	7:05:44	16:53:53	7:19:55	16:39:42	7:36:43	16:22:54	7:57:27	16:02:10
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27-12-24	5:57:39	18:04:55	6:15:00	17:47:34	6:33:26	17:29:08	6:54:32	17:08:02	7:06:50	16:55:44	7:20:56	16:41:38	7:37:38	16:24:56	7:58:14	16:04:20
28-12-24	5:58:09	18:05:24	6:15:27	17:48:06	6:33:50	17:29:42	6:54:53	17:08:40	7:07:09	16:56:24	7:21:12	16:42:21	7:37:51	16:25:42	7:58:23	16:05:09
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