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	X	Y
Jan 1	1	
Jan 15	15	
Jan 31	31	
Feb 1	32	
Feb 14	45	
Feb 28	59	
Mar 1	60	
Mar 15	74	
Mar 31	90	
Apr 1	91	
Apr 30	120	
May 1	121	
May 15	135	
May 31	151	
Jun 1	152	
Jun 15	166	
Jun 30	181	
July 1	182	
July 15	196	
July 31	212	
Aug 1	213	
Aug 15	227	
Aug 31	243	
Sept 1	244	
Sept 16	259	
Sept 30	273	
Oct 1	274	
Oct 15	288	
Oct 31	304	
Nov 1	305	
Nov 15	319	
Nov 30	334	
Dec 1	335	
Dec 15	349	
Dec 31	365	

	X	Y
Jan 1	1	
Jan 15	15	
Jan 31	31	
Feb 1	32	
Feb 14	45	
Feb 28	59	
Mar 1	60	
Mar 15	74	
Mar 31	90	
Apr 1	91	
Apr 30	120	
May 1	121	
May 15	135	
May 31	151	
Jun 1	152	
Jun 15	166	
Jun 30	181	
July 1	182	
July 15	196	
July 31	212	
Aug 1	213	
Aug 15	227	
Aug 31	243	
Sept 1	244	
Sept 16	259	
Sept 30	273	
Oct 1	274	
Oct 15	288	
Oct 31	304	
Nov 1	305	
Nov 15	319	
Nov 30	334	
Dec 1	335	
Dec 15	349	
Dec 31	365	

	X	Y
Jan 1	1	
Jan 15	15	
Jan 31	31	
Feb 1	32	
Feb 14	45	
Feb 28	59	
Mar 1	60	
Mar 15	74	
Mar 31	90	
Apr 1	91	
Apr 30	120	
May 1	121	
May 15	135	
May 31	151	
Jun 1	152	
Jun 15	166	
Jun 30	181	
July 1	182	
July 15	196	
July 31	212	
Aug 1	213	
Aug 15	227	
Aug 31	243	
Sept 1	244	
Sept 16	259	
Sept 30	273	
Oct 1	274	
Oct 15	288	
Oct 31	304	
Nov 1	305	
Nov 15	319	
Nov 30	334	
Dec 1	335	
Dec 15	349	
Dec 31	365	

X	Y	X	Y
1		27	
2		28	
3		29	
4		30	
5		31	
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9		35	
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22		48	
23		49	
24		50	
25		51	
26		52	

X	Y	X	Y
1		27	
2		28	
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5		31	
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24		50	
25		51	
26		52	

x	y	x	y	x	y	x	y	x	y	x	y	x	y
1		31		61		91		121		151		181	
2		32		62		92		122		152		182	
3		33		63		93		123		153		183	
4		34		64		94		124		154		184	
5		35		65		95		125		155		185	
6		36		66		96		126		156		186	
7		37		67		97		127		157		187	
8		38		68		98		128		158		188	
9		39		69		99		129		159		189	
10		40		70		100		130		160		190	
11		41		71		101		131		161		191	
12		42		72		102		132		162		192	
13		43		73		103		133		163		193	
14		44		74		104		134		164		194	
15		45		75		105		135		165		195	
16		46		76		106		136		166		196	
17		47		77		107		137		167		197	
18		48		78		108		138		168		198	
19		49		79		109		139		169		199	
20		50		80		110		140		170		200	
21		51		81		111		141		171		201	
22		52		82		112		142		172		202	
23		53		83		113		143		173		203	
24		54		84		114		144		174		204	
25		55		85		115		145		175		205	
26		56		86		116		146		176		206	
27		57		87		117		147		177		207	
28		58		88		118		148		178		208	
29		59		89		119		149		179		209	
30		60		90		120		150		180		210	

x	y	x	y	x	y	x	y	x	y	x	y
211		241		271		301		331		361	
212		242		272		302		332		362	
213		243		273		303		333		363	
214		244		274		304		334		364	
215		245		275		305		335		365	
216		246		276		306		336			
217		247		277		307		337			
218		248		278		308		338			
219		249		279		309		339			
220		250		280		310		340			
221		251		281		311		341			
222		252		282		312		342			
223		253		283		313		343			
224		254		284		314		344			
225		255		285		315		345			
226		256		286		316		346			
227		257		287		317		347			
228		258		288		318		348			
229		259		289		319		349			
230		260		290		320		350			
231		261		291		321		351			
232		262		292		322		352			
233		263		293		323		353			
234		264		294		324		354			
235		265		295		325		355			
236		266		296		326		356			
237		267		297		327		357			
238		268		298		328		358			
239		269		299		329		359			
240		270		300		330		360			

	x	y
midnight	0	
1:00AM	1	
2:00AM	2	
3:00AM	3	
4:00AM	4	
5:00AM	5	
6:00AM	6	
7:00AM	7	
8:00AM	8	
9:00AM	9	
10:00AM	10	
11:00AM	11	
noon	12	
1:00 PM	13	
2:00 PM	14	
3:00 PM	15	
4:00 PM	16	
5:00 PM	17	
6:00 PM	18	
7:00 PM	19	
8:00 PM	20	
9:00 PM	21	
10:00 PM	22	
11:00 PM	23	
12:00 AM (next day)	24	

	x	y
midnight	0	
1:00AM	1	
2:00AM	2	
3:00AM	3	
4:00AM	4	
5:00AM	5	
6:00AM	6	
7:00AM	7	
8:00AM	8	
9:00AM	9	
10:00AM	10	
11:00AM	11	
noon	12	
1:00 PM	13	
2:00 PM	14	
3:00 PM	15	
4:00 PM	16	
5:00 PM	17	
6:00 PM	18	
7:00 PM	19	
8:00 PM	20	
9:00 PM	21	
10:00 PM	22	
11:00 PM	23	
12:00 AM (next day)	24	

	x	y		x	y
12:00AM midnight	0		12:00PM noon	12	
12:30AM	0.5		12:30PM	12.5	
1:00AM	1		1:00PM	13	
1:30AM	1.5		1:30PM	13.5	
2:00AM	2		2:00PM	14	
2:30AM	2.5		2:30PM	14.5	
3:00AM	3		3:00PM	15	
3:30AM	3.5		3:30PM	15.5	
4:00AM	4		4:00PM	16	
4:30AM	4.5		4:30PM	16.5	
5:00AM	5		5:00PM	17	
5:30AM	5.5		5:30PM	17.5	
6:00AM	6		6:00PM	18	
6:30AM	6.5		6:30PM	18.5	
7:00AM	7		7:00PM	19	
7:30AM	7.5		7:30PM	19.5	
8:00AM	8		8:00PM	20	
8:30AM	8.5		8:30PM	20.5	
9:00AM	9		9:00PM	21	
9:30AM	9.5		9:30PM	21.5	
10:00AM	10		10:00PM	22	
10:30AM	10.5		10:30PM	22.5	
11:00AM	11		11:00PM	23	
11:30AM	11.5		11:30PM	23.5	
			12:00AM (Next day)	24	



	x	y		x	y
12:00AM Midnight	0		12:00PM Noon	12	
12:15AM	0.25		12:15PM	12.25	
12:30AM	0.5		12:30PM	12.5	
12:45AM	0.75		12:45PM	12.75	
1:00AM	1		1:00PM	13.	
1:15AM	1.25		1:15PM	13.25	
1:30AM	1.5		1:30PM	13.5	
1:45AM	1.75		1:45PM	13.75	
2:00AM	2		2:00PM	14.	
2:15AM	2.25		2:15PM	14.25	
2:30AM	2.5		2:30PM	14.5	
2:45AM	2.75		2:45PM	14.75	
3:00AM	3		3:00PM	15.	
3:15AM	3.25		3:15PM	15.25	
3:30AM	3.5		3:30PM	15.5	
3:45AM	3.75		3:45PM	15.75	
4:00AM	4		4:00PM	16.	
4:15AM	4.25		4:15PM	16.25	
4:30AM	4.5		4:30PM	16.5	
4:45AM	4.75		4:45PM	16.75	
5:00AM	5		5:00PM	17.	
5:15AM	5.25		5:15PM	17.25	
5:30AM	5.5		5:30PM	17.5	
5:45AM	5.75		5:45PM	17.75	
6:00AM	6		6:00PM	18.	
6:15AM	6.25		6:15PM	18.25	
6:30AM	6.5		6:30PM	18.5	
6:45AM	6.75		6:45PM	18.75	
7:00AM	7		7:00PM	19.	
7:15AM	7.25		7:15PM	19.25	
7:30AM	7.5		7:30PM	19.5	
7:45AM	7.75		7:45PM	19.75	
8:00AM	8		8:00PM	20.	
8:15AM	8.25		8:15PM	20.25	
8:30AM	8.5		8:30PM	20.5	
8:45AM	8.75		8:45PM	20.75	
9:00AM	9		9:00PM	21.	
9:15AM	9.25		9:15PM	21.25	
9:30AM	9.5		9:30PM	21.5	
9:45AM	9.75		9:45PM	21.75	
10:00AM	10		10:00PM	22.	
10:15AM	10.25		10:15PM	22.25	
10:30AM	10.5		10:30PM	22.5	
10:45AM	10.75		10:45PM	22.75	
11:00AM	11		11:00PM	23.	
11:15AM	11.25		11:15PM	23.25	
11:30AM	11.5		11:30PM	23.5	
11:45AM	11.75		11:45PM	23.75	

	x	y		x	y		x	y		x	y
12:00AM Midnight	0		6:00AM	6		12:00PM Noon	12		6:00PM	18.	
12:15AM	0.25		6:15AM	6.25		12:15PM	12.25		6:15PM	18.25	
12:30AM	0.5		6:30AM	6.5		12:30PM	12.5		6:30PM	18.5	
12:45AM	0.75		6:45AM	6.75		12:45PM	12.75		6:45PM	18.75	
1:00AM	1		7:00AM	7		1:00PM	13.		7:00PM	19.	
1:15AM	1.25		7:15AM	7.25		1:15PM	13.25		7:15PM	19.25	
1:30AM	1.5		7:30AM	7.5		1:30PM	13.5		7:30PM	19.5	
1:45AM	1.75		7:45AM	7.75		1:45PM	13.75		7:45PM	19.75	
2:00AM	2		8:00AM	8		2:00PM	14.		8:00PM	20.	
2:15AM	2.25		8:15AM	8.25		2:15PM	14.25		8:15PM	20.25	
2:30AM	2.5		8:30AM	8.5		2:30PM	14.5		8:30PM	20.5	
2:45AM	2.75		8:45AM	8.75		2:45PM	14.75		8:45PM	20.75	
3:00AM	3		9:00AM	9		3:00PM	15.		9:00PM	21.	
3:15AM	3.25		9:15AM	9.25		3:15PM	15.25		9:15PM	21.25	
3:30AM	3.5		9:30AM	9.5		3:30PM	15.5		9:30PM	21.5	
3:45AM	3.75		9:45AM	9.75		3:45PM	15.75		9:45PM	21.75	
4:00AM	4		10:00AM	10		4:00PM	16.		10:00PM	22.	
4:15AM	4.25		10:15AM	10.25		4:15PM	16.25		10:15PM	22.25	
4:30AM	4.5		10:30AM	10.5		4:30PM	16.5		10:30PM	22.5	
4:45AM	4.75		10:45AM	10.75		4:45PM	16.75		10:45PM	22.75	
5:00AM	5		11:00AM	11		5:00PM	17.		11:00PM	23.	
5:15AM	5.25		11:15AM	11.25		5:15PM	17.25		11:15PM	23.25	
5:30AM	5.5		11:30AM	11.5		5:30PM	17.5		11:30PM	23.5	
5:45AM	5.75		11:45AM	11.75		5:45PM	17.75		11:45PM	23.75	

	x	y		x	y
12:00AM midnight	0		12:00PM noon	12	
12:30AM	0.5		12:30PM	12.5	
1:00AM	1		1:00PM	13	
1:30AM	1.5		1:30PM	13.5	
2:00AM	2		2:00PM	14	
2:30AM	2.5		2:30PM	14.5	
3:00AM	3		3:00PM	15	
3:30AM	3.5		3:30PM	15.5	
4:00AM	4		4:00PM	16	
4:30AM	4.5		4:30PM	16.5	
5:00AM	5		5:00PM	17	
5:30AM	5.5		5:30PM	17.5	
6:00AM	6		6:00PM	18	
6:30AM	6.5		6:30PM	18.5	
7:00AM	7		7:00PM	19	
7:30AM	7.5		7:30PM	19.5	
8:00AM	8		8:00PM	20	
8:30AM	8.5		8:30PM	20.5	
9:00AM	9		9:00PM	21	
9:30AM	9.5		9:30PM	21.5	
10:00AM	10		10:00PM	22	
10:30AM	10.5		10:30PM	22.5	
11:00AM	11		11:00PM	23	
11:30AM	11.5		11:30PM	23.5	
			12:00AM (Next day)	24	

x	y	x	y
0		30	
1		31	
2		32	
3		33	
4		34	
5		35	
6		36	
7		37	
8		38	
9		39	
10		40	
11		41	
12		42	
13		43	
14		44	
15		45	
16		46	
17		47	
18		48	
19		49	
20		50	
21		51	
22		52	
23		53	
24		54	
25		55	
26		56	
27		57	
28		58	
29		59	
		60	

x	y	x	y
0		30	
1		31	
2		32	
3		33	
4		34	
5		35	
6		36	
7		37	
8		38	
9		39	
10		40	
11		41	
12		42	
13		43	
14		44	
15		45	
16		46	
17		47	
18		48	
19		49	
20		50	
21		51	
22		52	
23		53	
24		54	
25		55	
26		56	
27		57	
28		58	
29		59	
		60	

x	y	x	y	x	y	x	y
0		15.		30.		45.	
0.5		15.5		30.5		45.5	
1.		16.		31.		46.	
1.5		16.5		31.5		46.5	
2.		17.		32.		47.	
2.5		17.5		32.5		47.5	
3.		18.		33.		48.	
3.5		18.5		33.5		48.5	
4.		19.		34.		49.	
4.5		19.5		34.5		49.5	
5.		20.		35.		50.	
5.5		20.5		35.5		50.5	
6.		21.		36.		51.	
6.5		21.5		36.5		51.5	
7.		22.		37.		52.	
7.5		22.5		37.5		52.5	
8.		23.		38.		53.	
8.5		23.5		38.5		53.5	
9.		24.		39.		54.	
9.5		24.5		39.5		54.5	
10.		25.		40.		55.	
10.5		25.5		40.5		55.5	
11.		26.		41.		56.	
11.5		26.5		41.5		56.5	
12.		27.		42.		57.	
12.5		27.5		42.5		57.5	
13.		28.		43.		58.	
13.5		28.5		43.5		58.5	
14.		29.		44.		59.	
14.5		29.5		44.5		59.5	
						60.	



