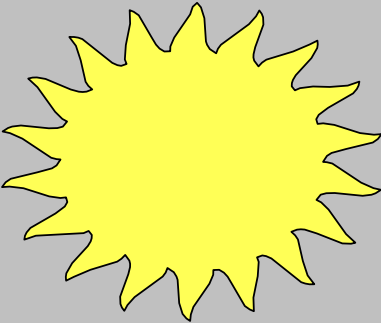



	A	B	C	D	E	F	G	H	I
1	<b>Parameters</b>								
2	<b>Latitude Deg</b>		32 degrees						
3	<b>Latitude Min</b>		42.88 minutes						
4	<b>Longitude Deg</b>		117 degrees						
5	<b>Longitude Min</b>		9.35 minutes						
6	<b>Date</b>		18-Apr-21						
7									
8									
9	<b>Calculations</b>				<b>Charts</b>				
10	<b>Sunrise</b>		5:28 AM G.M.T.						
11	<b>Sunset</b>		6:30 PM G.M.T.						
12	<b>Sunrise</b>		5:16 AM Pacific S.T.						
13	<b>Sunset</b>		6:19 PM Pacific S.T.						
14	<b>Length of Day</b>		13:02 hrs:min						
15	<b>Azimuth of Sunris</b>		76.834 degrees						
16	<b>Azimuth of Sunset</b>		283.166 degrees						
17	<b>Alt of Sun at Noon</b>		68.334 degrees						
18	<b>Declination of Sur</b>		11.048 degrees						
19	<b>Equation of Time</b>		0.676 degrees						
20									
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	A	B	C	D	E	F	G	H	I
42									
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46									
47									
48		<b>Date</b>	<b>SunRise</b>	<b>SunSet</b>	<b>Alt</b>	<b>Daylight</b>	<b>Az_Sr</b>	<b>Az_Ss</b>	
49			5:16:43 AM	6:19:10 PM	68	13:02	76.8342	283.1658	
50		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
51		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
52		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
53		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
54		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
55		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
56		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
57		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
58		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
59		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
60		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
61		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
62		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
63		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
64		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
65		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
66		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
67		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
68		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
69		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
70		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
71		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
72		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
73		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	
74		Err:522	Err:522	Err:522	###	Err:522	Err:522	Err:522	

Cities

City	Lat-Deg	Lat-Min	Lon-Deg	Lon-Min
Abilene, Tex.	32	27.08	99	43.85
Akron, Oh.	41	5	81	30.73
Albany, N.Y.	42	39.02	73	45.02
Albuquerque, N.M.	35	5.02	106	39.08
Alert, N.W.T.	82	29.83	62	21.25
Allentown, Pa.	40	36.18	75	28.1
Altoona, Pa.	40	30.92	78	24.05
Amarillo, Tex.	35	12.45	101	50.07
Anchorage, Alas.	61	10	149	59
Ann Arbor, Mich.	42	16.98	83	44.87
Asheville, N.C.	35	35.7	82	33.43
Ashland, Ky.	38	28.6	82	38.38
Athens, Greece	37	58	23	44
Atlanta, Ga.	33	45.17	84	23.62
Atlantic City, N.J.	39	21.53	74	25.88
Augusta, Ga.	33	28.33	81	58
Augusta, Me.	44	18.88	69	46.48
Austin, Tex.	30	16.15	97	44.62
Bakersfield, Cal.	35	22.52	119	1.3
Baltimore, Md.	39	17.43	76	36.75
Bangor, Me.	44	48.22	68	46.3
Baton Rouge, La.	30	26.97	91	11
Battle Creek, Mich.	42	18.97	85	10.8
Bay City, Mich.	43	36.07	83	53.25
Beaumont, Tex.	30	5.33	94	6.15
Belleville, Ont.	44	9.7	77	23.18
Bellingham, Wash.	48	45.57	122	28.6
Berkeley, Cal.	37	52.17	122	16.28
Berlin, Germany	52	32	13	25
Bethlehem, Pa.	40	37.27	75	22.57
Billings, Mon.	45	47	108	30.07
Biloxi, Miss.	30	23.8	88	53
Binghamton, N.Y.	42	6.05	75	54.78
Birmingham, Ala.	33	31.02	86	48.6
Bismarck, N.D.	46	48.38	100	47.28
Bloomington, Ill.	40	28.97	88	59.6
Boise, Ida.	43	37.12	116	11.97
Boston, Mass.	42	21.4	71	3.42
Bowling Green, Ky.	36	59.68	86	26.55
Brandon, Man.	49	51	99	57
Brantford, Ont.	43	8.57	80	15.65

Cities

Brattleboro, Vt.	42	51.1	72	33.8
Bridgeport, Conn.	41	10.82	73	11.37
Brockton, Mass.	42	5.03	71	1.42
Brownsville, Tex.	25	54.12	97	29.97
Buffalo, N.Y.	42	52.87	78	52.35
Burlington, Ont.	43	19.55	79	47.95
Burlington, Vt.	44	28.57	73	12.77
Butte, Mon.	46	1.1	112	32.18
Calgary, Alta.	51	2.77	114	3.4
Cambridge, Mass.	42	22.02	71	6.37
Camden, N.J.	39	56.68	75	7.23
Canton, Oh.	40	47.83	81	22.62
Carson City, Nev.	39	10	119	46
Cedar Rapids, Ia.	41	58.02	91	39.88
Central Islip, N.Y.	40	47.4	73	12
Champaign, Ill.	40	7.08	88	14.8
Charleston, S.C.	32	46.58	79	55.88
Charleston, W.Va.	38	21.02	81	37.87
Charlotte, N.C.	35	13.73	80	50.75
Charlottetown, P.E.I.	46	14.12	63	7.82
Chattanooga, Tenn.	35	2.68	85	18.53
Cheyenne, Wy.	41	8.15	104	49.12
Chicago, Ill.	41	52.47	87	38.37
Churchill, Man.	58	45.25	94	10
Cincinnati, Oh.	39	6.12	84	30.58
Cleveland, Oh.	41	29.85	81	41.83
Colorado Springs	38	50.12	104	49.27
Columbia, Mo.	38	57.05	92	19.77
Columbia, S.C.	34	0.03	81	2
Columbus, Ga.	32	28.12	84	59.4
Columbus, Oh.	39	57.78	83	0.28
Concord, N.H.	43	12.37	71	32.42
Corpus Christi, Tex.	27	47.85	97	23.75
Dallas, Tex.	32	47.15	96	47.62
Dartmouth, N.S.	44	39.83	63	34.13
Davenport, Ia.	41	31.32	90	34.55
Dawson, Yukon	64	3.5	139	26
Dayton, Oh.	39	45.53	84	11.72
Daytona Beach, Fla.	29	12.73	81	1.17
Decatur, Ill.	39	50.7	88	56.78
Denver, Col.	39	44.97	104	59.37
Des Moines, Ia.	41	35.23	93	37
Detroit, Mich.	42	19.8	83	2.95
Dodge City, Kan.	37	45.28	100	1.15

Cities

Dubuque, Ia.	42	29.92	90	40.13
Duluth, Minn.	46	46.93	92	6.4
Durham, N.C.	36	0	78	54.75
Eau Claire, Wis.	44	48.52	91	29.82
Edmonton, Alta.	53	32.72	113	29.35
El Paso, Tex.	31	45.6	106	29.18
Elizabeth, N.J.	40	39.72	74	12.98
Enid, Okla.	36	23.67	97	52.58
Erie, Pa.	42	7.25	80	4.95
Eugene, Ore.	44	3.27	123	5.5
Eureka, Cal.	40	48.13	124	9.77
Evansville, Ind.	37	58.33	87	34.35
Fairbanks, Alas.	64	48	147	51
Fall River, Mass.	41	42.1	71	9.3
Fargo, N.D.	46	52.5	96	47.3
Flagstaff, Ariz.	35	11.6	111	39.1
Flint, Mich.	43	0.83	83	41.55
Fort Wayne, Ind.	41	4.35	85	8.43
Fort Worth, Tex.	32	44.92	97	19.73
Fredericton, N.B.	45	57.78	66	38.63
Fresno, Cal.	36	44.2	119	47.18
Ft. Smith, Ark.	35	23.17	94	25.6
Gadsden, Ala.	34	0.95	86	0.68
Gainesville, Fla.	29	38.93	82	19.32
Gallup, N.M.	35	31.5	108	44.5
Galveston, Tex.	29	18.17	94	47.72
Gary, Ind.	41	36.2	87	20.32
Grand Junction, Col.	39	4.1	108	33.9
Grand Rapids, Mich.	42	58.05	85	40.22
Great Falls, Mon.	47	29.55	111	18.38
Green Bay, Wis.	44	30.8	88	0.83
Greensboro, N.C.	36	4.28	79	47.42
Greenville, S.C.	34	50.83	82	24.02
Guelph, Ont.	43	32.58	80	14.9
Gulfport, Miss.	30	22.07	89	5.6
Halifax, N.S.	44	38.9	63	34.5
Hamilton, Oh.	39	23.98	84	33.78
Hamilton, Ont.	43	15.33	79	52.5
Harrisburg, Pa.	40	15.72	76	52.98
Hartford, Conn.	41	46.2	72	40.82
Helena, Mon.	46	35.55	112	2.4
Hilo, Hawaii	19	43.5	155	5.4
Holyoke, Mass.	42	12.48	72	36.6
Honolulu, Ha.	21	18.37	157	51.58

Cities

Houston, Tex.	29	45.43	95	21.62
Hull, Que.	45	25.7	75	42.68
Huntington, W.Va.	38	25.2	82	26.55
Huntsville, Ala.	34	44.3	86	35.32
Indianapolis, Ind.	39	46.12	86	9.77
Iowa City, Ia.	41	39.62	91	31.88
Jackson, Mich.	42	14.72	84	24.37
Jackson, Miss.	32	17.93	90	11.1
Jacksonville, Fla.	30	19.73	81	39.7
Jersey City, N.J.	40	43.83	74	3.93
Jerusalem, Israel	31	47	35	13
Johannesburg, So. Afr.	26	10	28	2
Johnstown, Pa.	40	19.58	78	55.05
Joplin, Mo.	37	5.43	94	30
Juneau, Alas.	58	18.2	134	24.5
Kalamazoo, Mich.	42	17.48	85	35.23
Kansas City, Kan.	39	7.07	94	38.4
Kansas City, Mo.	39	4.93	94	35.33
Kenosha, Wis.	42	35.72	87	50.18
Key West, Fla.	24	33.5	81	48.2
Kingston, Ont.	44	13.88	76	28.8
Kitchener, Ont.	43	26.97	80	29.2
Knoxville, Tenn.	35	57.65	83	55.12
La Salle, Que.	45	25.5	73	39.5
Lafayette, Ind.	40	25.18	86	53.65
Lancaster, Pa.	40	2.42	76	18.48
Lansing, Mich.	42	44.02	84	33.25
Laredo, Tex.	27	30.37	99	30.5
Las Vegas, Nev.	36	10.33	115	8.62
Laval, Que.	45	33.08	73	44.7
Lawrence, Mass.	42	42.27	71	10.13
Lethbridge, Alta.	49	41.63	112	49.97
Lexington, Ky.	38	2.83	84	29.77
Lihue, Ha.	21	58.8	159	22.5
Lima, Oh.	40	44.58	84	6.33
Lincoln, Neb.	40	48.98	96	42.25
Little Rock, Ark.	34	44.7	92	16.62
London, Ont.	42	59.28	81	14.05
London, UK (Greenwich)	51	30	0	0
Long Beach, Cal.	33	46.23	118	11.3
Lorain, Oh.	41	28.08	82	10.82
Los Angeles, Cal.	34	3.25	118	14.47
Louisville, Ky.	38	14.78	85	45.82
Lowell, Mass.	42	38.42	71	19.23

Cities

Lubbock, Tex.	33	35.08	101	50.55
Macon, Ga.	32	50.2	83	37.6
Madison, Wis.	43	4.38	89	22.92
Manchester, N.H.	42	59.47	71	27.68
Marshall, Tex.	32	33	94	23
Memphis, Tenn.	35	8.77	90	3.22
Meriden, Conn.	41	32.1	72	47.5
Mexico City, Mexico	19	25.75	99	7
Miami, Fla.	25	46.62	80	11.53
Milwaukee, Wis.	43	2.32	87	54.25
Minneapolis, Minn.	44	58.95	93	15.72
Minot, N.D.	48	14.15	101	17.63
Mississauga, Ont.	43	33	79	35
Mobile, Ala.	30	41.6	88	2.55
Moline, Ill.	41	30.52	90	30.82
Moncton, N.B.	46	5.3	64	46.68
Montgomery, Ala.	32	22.55	86	18.52
Montpelier, Vt.	44	15.6	72	34.68
Montreal, Que.	45	30.55	73	33.23
Moose Jaw, Sask.	50	23.57	105	32.07
Moscow, USSR	55	45	37	42
Muncie, Ind.	40	11.47	85	23.27
Nashville, Tenn.	36	9.55	86	46.92
Natchez, Miss.	31	33.8	91	23.5
New Bedford, Mass.	41	38.22	70	55.68
New Britain, Conn.	41	40.13	72	46.98
New Delhi, India	28	38	77	12
New Haven, Conn.	41	18.42	72	55.5
New Orleans, La.	29	56.88	90	4.17
New York, N.Y.	40	45.1	73	59.65
Newark, N.J.	40	44.23	74	10.32
Niagara Falls, N.Y.	43	5.57	79	3.43
Niagara Falls, Ont.	43	6.37	79	3.85
Nome, Alas.	64	30	165	25
Norfolk, Va.	36	51.17	76	17.35
North Bay, Ont.	46	18.58	79	27.75
Oakland, Cal.	37	48.05	122	15.9
Ogden, Ut.	41	13.52	111	58.35
Oklahoma City	35	28.43	97	31.07
Omaha, Neb.	41	15.7	95	56.23
Orlando, Fla.	28	32.7	81	22.63
Oshawa, Ont.	43	53.77	78	51.95
Ottawa, Ont.	45	26.4	75	41.7
Paducah, Ky.	37	5.22	88	35.93

Cities

Paris, France	48	50	2	20
Pasadena, Cal.	34	8.73	118	8.68
Paterson, N.J.	40	55.02	74	10.35
Peking, China	39	54	116	28
Pensacola, Fla.	30	24.85	87	12.93
Peoria, Ill.	40	41.7	89	35.55
Peterborough, Ont.	44	18.53	78	19.22
Philadelphia, Pa.	39	56.97	75	9.35
Phoenix, Ariz.	33	27.2	112	4.47
Pierre, S.D.	44	22.3	100	20.9
Pittsburgh, Pa.	40	26.32	80	0
Pittsfield, Mass.	42	26.88	73	15.23
Pocatello, Ida.	42	51.63	112	27.02
Port Arthur, Tex.	29	52.5	93	56.25
Portland, Me.	43	39.55	70	15.32
Portland, Ore.	45	31.1	122	40.58
Portsmouth, N.H.	43	4.5	70	45.4
Portsmouth, Va.	36	50.12	76	18.23
Prince Rupert, B.C.	54	19	130	19
Providence, R.I.	41	49.53	71	24.68
Provo, Ut.	40	14.1	111	39.4
Pueblo, Col.	38	16.28	104	36.55
Quebec City, Que.	46	48.85	71	12.5
Racine, Wis.	42	43.82	87	47.2
Raleigh, N.C.	35	46.63	78	38.35
Rapid City, S.D.	44	4.87	103	13.18
Reading, Pa.	40	20.15	75	55.67
Regina, Sask.	50	26.92	104	36.83
Reno, Nev.	39	31.45	119	48.67
Richmond, Va.	37	32.25	77	26.15
Rio de Janeiro, Brazil	22	53	43	13
Roanoke, Va.	37	16.22	79	56.73
Rochester, Minn.	44	1.35	92	28.05
Rochester, N.Y.	43	9.68	77	36.35
Rockford, Ill.	42	16.12	89	5.8
Rome, Italy	41	53	12	30
Sacramento, Cal.	38	34.95	121	29.68
Saginaw, Mich.	43	25.87	83	56.08
Saint John, N.	This workbook is based on a file I downloaded from an on-line service. The author is unknown. If anyone knows who developed this, please let me know so I can give proper credit.			8
Salem, Ore.				8
Salina, Kan.				7
Salt Lake City,				3
San Angelo, T				5
San Antonio, T				1
	John Walkenbach			
	CIS: 70363,3014			



Cities

San Bernardino					7
San Diego, Cal.	32	42.88	117	9.35	
San Francisco, Cal.	37	46.65	122	24.67	
San Jose, Cal.	37	20.27	121	53.4	
San Juan, P.R.	18	27	66	4.25	
Santa Barbara, Cal.	34	25.3	119	41.92	
Santa Cruz, Cal.	36	58.3	122	1.3	
Santa Fe, N.M.	35	41.18	105	56.17	
Sarasota, Fla.	27	20.08	82	32.5	
Saskatoon, Sask.	52	7.82	106	39.58	
Sault Ste. Marie, Ont.	46	30.4	84	20.07	
Savannah, Ga.	32	4.7	81	5.62	
Schenectady, N.Y.	42	48.7	73	55.7	
Scranton, Pa.	41	24.53	75	39.77	
Seattle, Wash.	47	36.53	122	20.2	
Sheboygan, Wis.	43	45.05	87	42.87	
Sherbrooke, Que.	45	24.45	71	51.12	
Sheridan, Wy.	44	47.92	106	57.17	
Shreveport, La.	32	30.77	93	44.97	
Sioux City, Ia.	42	29.77	96	24.5	
Sioux Falls, S.D.	43	32.58	96	43.58	
Somerville, Mass.	42	23.25	71	6.12	
South Bend, Ind.	41	40.55	86	15.02	
Spartanburg, S.C.	34	57.05	81	56.1	
Spokane, Wash.	47	39.53	117	25.55	
Springfield, Ill.	39	47.97	89	38.85	
Springfield, Mass.	42	6.35	72	35.53	
Springfield, Mo.	37	13.05	93	17.53	
Springfield, Oh.	39	55.63	83	48.48	
St. Catharines, Ont.	43	9.55	79	14.83	
St. Cloud, Minn.	45	34	94	10.4	
St. John's, Nfld.	47	33.7	52	42.8	
St. Joseph, Mo.	39	45.95	94	51.03	
St. Louis, Mo.	38	37.75	90	12.37	
St. Paul, Minn.	44	57.32	93	6.12	
St. Petersburg, Fla.	27	46.3	82	38.32	
Stamford, Conn.	41	3.15	73	32.4	
Steubenville, Oh.	40	21.7	80	36.88	
Stockton, Cal.	37	57.5	121	17.27	
Sudbury, Ont.	46	29.4	80	59.4	
Superior, Wis.	46	43.23	92	6.12	
Sydney, Australia	33	52	151	12	
Sydney, N.S.	46	8.25	60	11.8	
Syracuse, N.Y.	43	3.07	76	9.23	

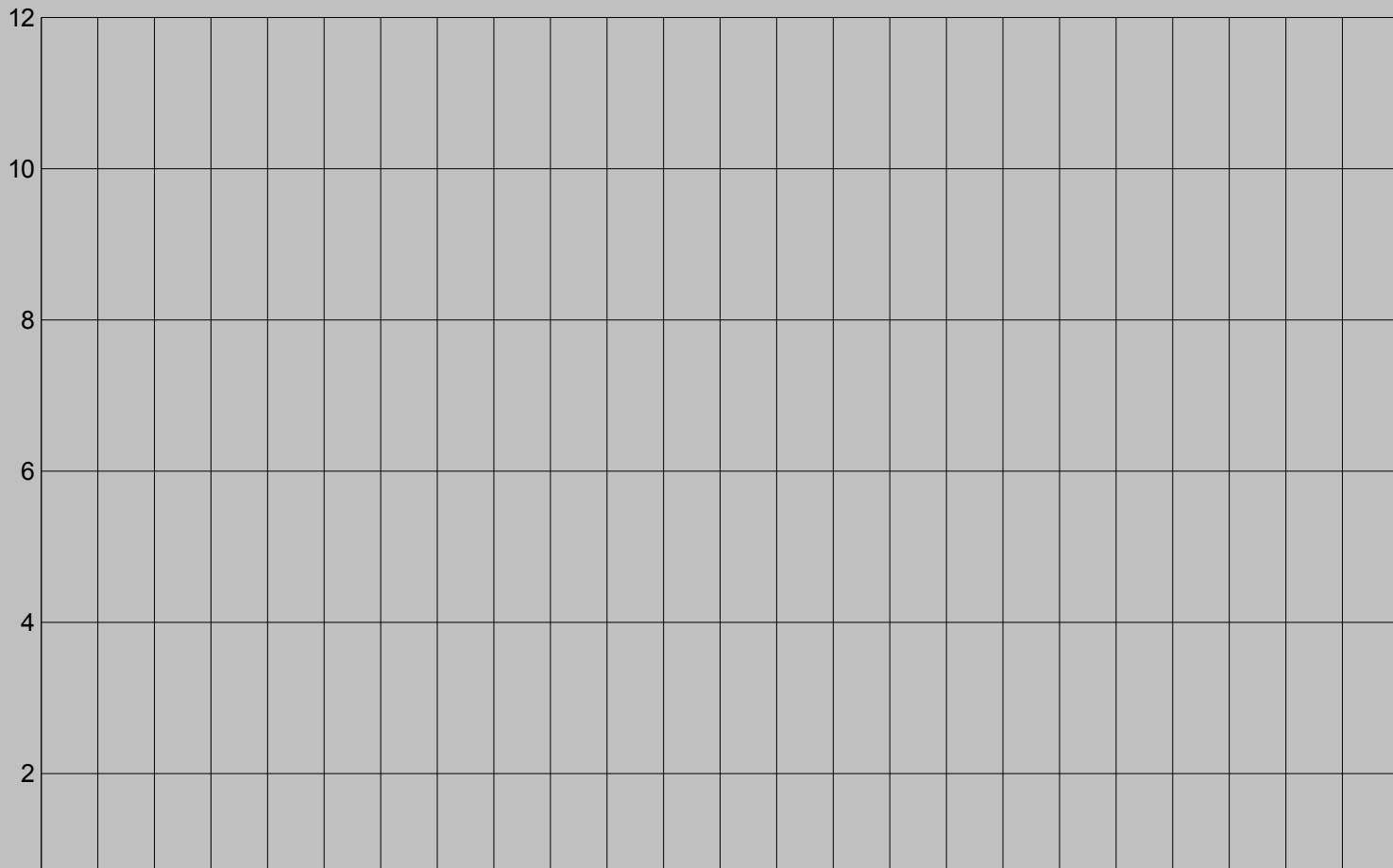
Cities

Tacoma, Wash.	47	14.98	122	26.25
Tallahassee, Fla.	30	26.5	84	16.93
Tampa, Fla.	27	56.97	82	27.42
Terre Haute, Ind.	39	28.05	87	24.43
Texarkana, Tex.	33	25.8	94	2.5
Thunder Bay, Ont.	48	22.9	89	14.7
Tokyo, Japan	35	45	139	45
Toledo, Oh.	41	39.23	83	32.65
Topeka, Kan.	39	3.27	95	40.38
Toronto, Ont.	43	39.17	79	23
Trenton, N.J.	40	13.23	74	46.22
Trois-Rivieres, Que.	46	20.6	72	32.62
Troy, N.Y.	42	43.75	73	40.97
Tucson, Ariz.	32	13.25	110	58.13
Tulsa, Okla.	36	9.2	95	59.57
Urbana, Ill.	40	6.7	88	12.1
Utica, N.Y.	43	6.2	75	13.55
Vancouver, B.C.	49	18.93	123	4.73
Victoria, B.C.	48	25.72	123	21.82
Waco, Tex.	31	33.2	97	8
Walla Walla, Wash.	46	4.13	118	20.4
Warsaw, Poland	52	15	21	0
Washington, D.C.	38	53.85	77	0.55
Waterbury, Conn.	41	33.22	73	2.52
Waterloo, Ia.	42	29.67	92	20.33
West Palm Beach, Fla.	26	42.6	80	3.12
Wheeling, W. Va.	40	4.05	80	43.33
White Plains, N.Y.	41	2	73	45.8
Whitehorse, Yukon	60	43.28	135	3.05
Wichita Falls, Tex.	33	54.57	98	29.47
Wichita, Kan.	37	41.5	97	20.27
Wilkes-Barre, Pa.	41	14.53	75	53.28
Wilmington, Del.	39	44.77	75	32.85
Wilmington, N.C.	34	14.23	77	56.97
Windsor, Ont.	42	18.93	83	2.17
Winnipeg, Man.	49	53.93	97	8.38
Winston-Salem, N.C.	36	5.87	80	14.7
Worcester, Mass.	42	15.62	71	48.28
Yakima, Wash.	46	36.15	120	30.65
Yellowknife, N.W.T.	62	27.27	114	22.55
Yonkers, N.Y.	40	55.92	73	53.9
York, Pa.	39	57.58	76	43.6
Youngstown, Oh.	41	5.95	80	39.03
Yuma, Ariz.	32	42.9	114	37.4

Cities

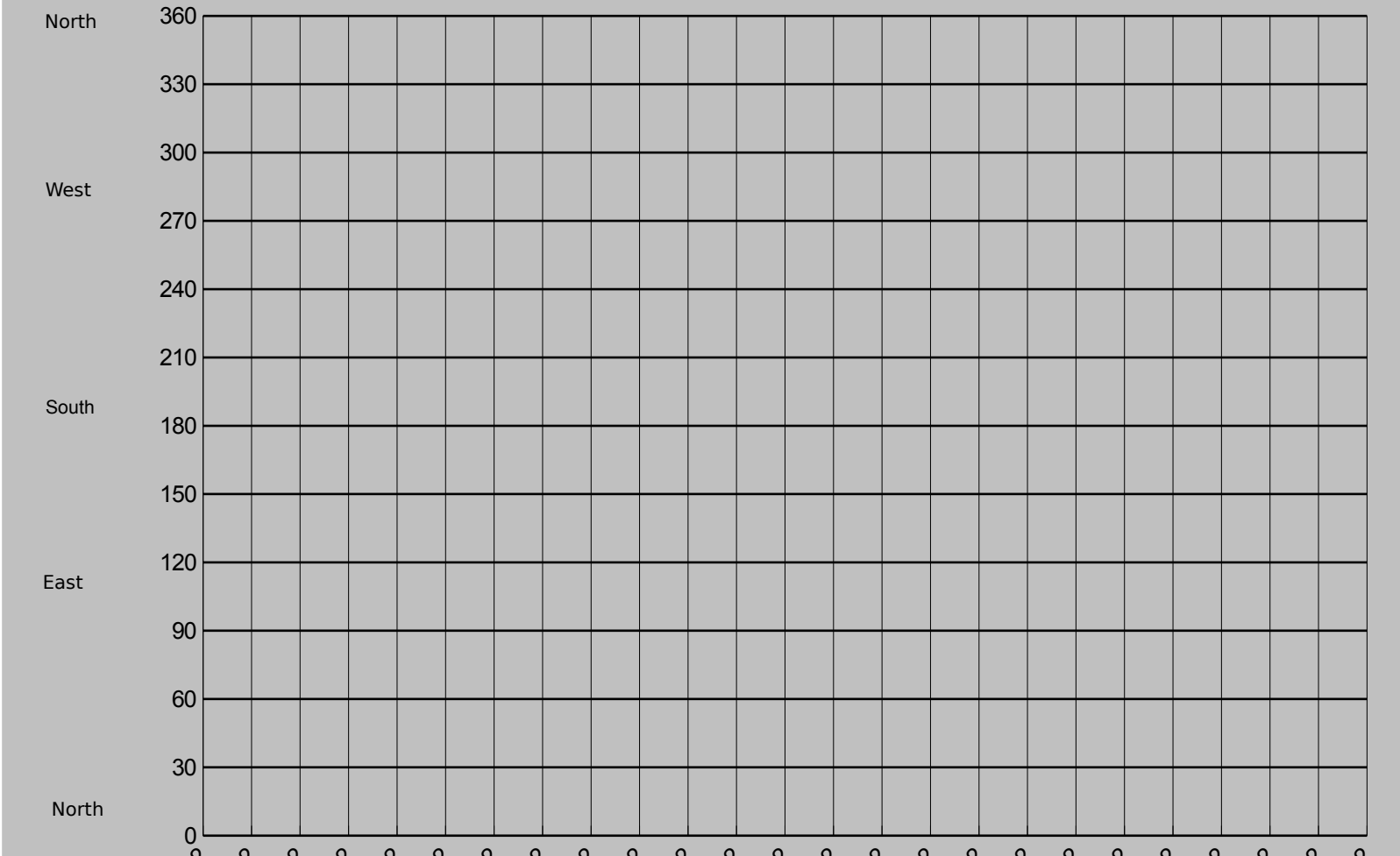
Zanesville, Oh.	39	56.3	82	0.5
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**ALTITUDE OF SUN ABOVE HORIZION  
At Noon in Degrees**





# AZIMUTH OF SUNRISE & SUNSET



Err:522 Err:522

— SunRise — SunSet





Month

— SunRise — SunSet



6:00																							
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