

Columbia Ave.

No 12.

12th street

2

F.B. 707

13th street

707

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1.....	2 $\frac{1}{2}$	21.....	49	41.....	95 $\frac{1}{2}$
2.....	4 $\frac{1}{2}$	22.....	51 $\frac{1}{2}$	42.....	98
3.....	7	23.....	53 $\frac{1}{2}$	43.....	100 $\frac{1}{2}$
4.....	9 $\frac{1}{2}$	24.....	56	44.....	102 $\frac{1}{2}$
5.....	11 $\frac{1}{2}$	25.....	58 $\frac{1}{2}$	45.....	105
6.....	14	26.....	60 $\frac{1}{2}$	46.....	107 $\frac{1}{2}$
7.....	16 $\frac{1}{2}$	27.....	63	47.....	109 $\frac{1}{2}$
8.....	18 $\frac{1}{2}$	28.....	65 $\frac{1}{2}$	48.....	112
9.....	21	29.....	67 $\frac{1}{2}$	49.....	114 $\frac{1}{2}$
10.....	23 $\frac{1}{2}$	30.....	70	50.....	116 $\frac{1}{2}$
11.....	25 $\frac{1}{2}$	31.....	72 $\frac{1}{2}$	51.....	119
12.....	28	32.....	74 $\frac{1}{2}$	52.....	121 $\frac{1}{2}$
13.....	30 $\frac{1}{2}$	33.....	77	53.....	123 $\frac{1}{2}$
14.....	32 $\frac{1}{2}$	34.....	79 $\frac{1}{2}$	54.....	126
15.....	35	35.....	81 $\frac{1}{2}$	55.....	128 $\frac{1}{2}$
16.....	37 $\frac{1}{2}$	36.....	84	56.....	130 $\frac{1}{2}$
17.....	39 $\frac{1}{2}$	37.....	86 $\frac{1}{2}$	57.....	133
18.....	42	38.....	88 $\frac{1}{2}$	58.....	135 $\frac{1}{2}$
19.....	44 $\frac{1}{2}$	39.....	91	59.....	137 $\frac{1}{2}$
20.....	46 $\frac{1}{2}$	40.....	93 $\frac{1}{2}$	60.....	140

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Table for Running on Slopes.

In the following table the first column shows the angle, the second, the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

Angle.	Cor. in links	Angle.	Cor. in links.	Angle.	Cor. in links.	Angle.	Cor. in links.
°		°		°		°	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.56	17	4.56	24	9.47	35	22.07

Columbia Street

West End

01952
5793 5799

3450 5797

3748 5795

3725 5793

123 5750

3701 5748

199 5725

275 5723

173 5700

250 4798

1482 475 1/2 North line P. Street

225 4793

228

2000

4-⁶⁰_{9 31}

198

1897 hit & started

Columbia St

Jan
11+50

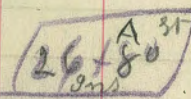
	8+78	11+25½	14+50
8+74	11+23½	14+48	
	8+50½	11+00½	14+24
8+48½	10+98½	14+22	
	10+95½	14+00	
	10+98½	13+98	
	10+50	13+95½	
	10+48	13+99½	
	7+50	10+25	13+50
7+44	10+28	13+48	
	7+25	10+00	13+25-
7+23	9+98	13+28	
	7+00	9+95½	13+00
6+98	9+98½	12+98	
	6+95-	9+50½	12+95-
6+93	9+48½	12+98	
	6+50	9+258	12+50
6+48	9+28½	12+48	
	6+25-	9+00	12+25-
6+23	8+98	12+28	North line & street-

Columbera street

	W	E	W	E
B.S.B.M.		22x00		25x05
		22x98	25x03	25x91
	22x90		25x79	
		22x50		25x55 $\frac{1}{2}$
	22x48		25x53 $\frac{1}{2}$	
		22x25 $\frac{1}{2}$		25x30 $\frac{1}{2}$
	22x25 $\frac{1}{2}$		25x28 $\frac{1}{2}$	
		21x99		25x05 $\frac{1}{2}$
	21x97		25x03 $\frac{1}{2}$	
		21x74		24x80
	21x72		24x78	
		21x50 $\frac{1}{2}$		23x65
	21x48 $\frac{1}{2}$		24x58	
		21x25 $\frac{1}{2}$		24x30
	21x23 $\frac{1}{2}$		24x28	
		20x99 $\frac{1}{2}$		24x05
	20x97 $\frac{1}{2}$		24x03	
		20x74 $\frac{1}{2}$		23x80 North line B street
Horton	20x92 $\frac{1}{2}$		23x78	
C sheet				

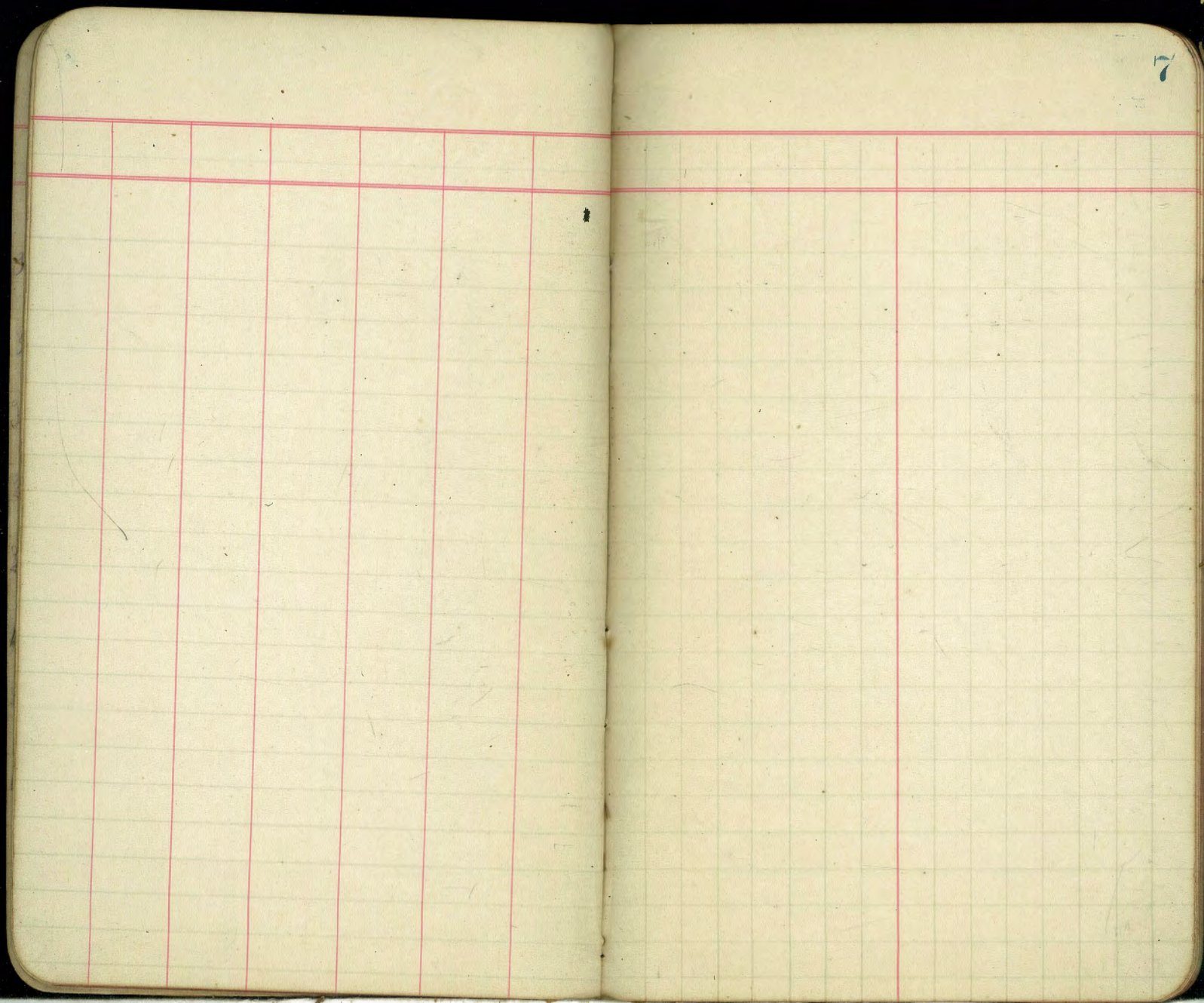
Columbia St

	29x11		
29x09			
28x89 $\frac{1}{2}$			
28x87			
28x89			
28x90			
28x08			
27x80	27x85 - 30x83 - end of pipe		
27x58	27x60 80x23	30x25 -	
	29x55 -	30x11	
25x32	25x37	29x88	
25x28	25x90	29x60	
	29x58	29x85 -	
	29x98		



on Columbia st sewer ends 25ft
back on line of building on
ash street

The image shows an open notebook with two pages. The pages are cream-colored and feature light blue horizontal ruling. The left page is divided into six vertical columns by five red lines. The right page is divided into two vertical sections by one red line. The number '6' is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

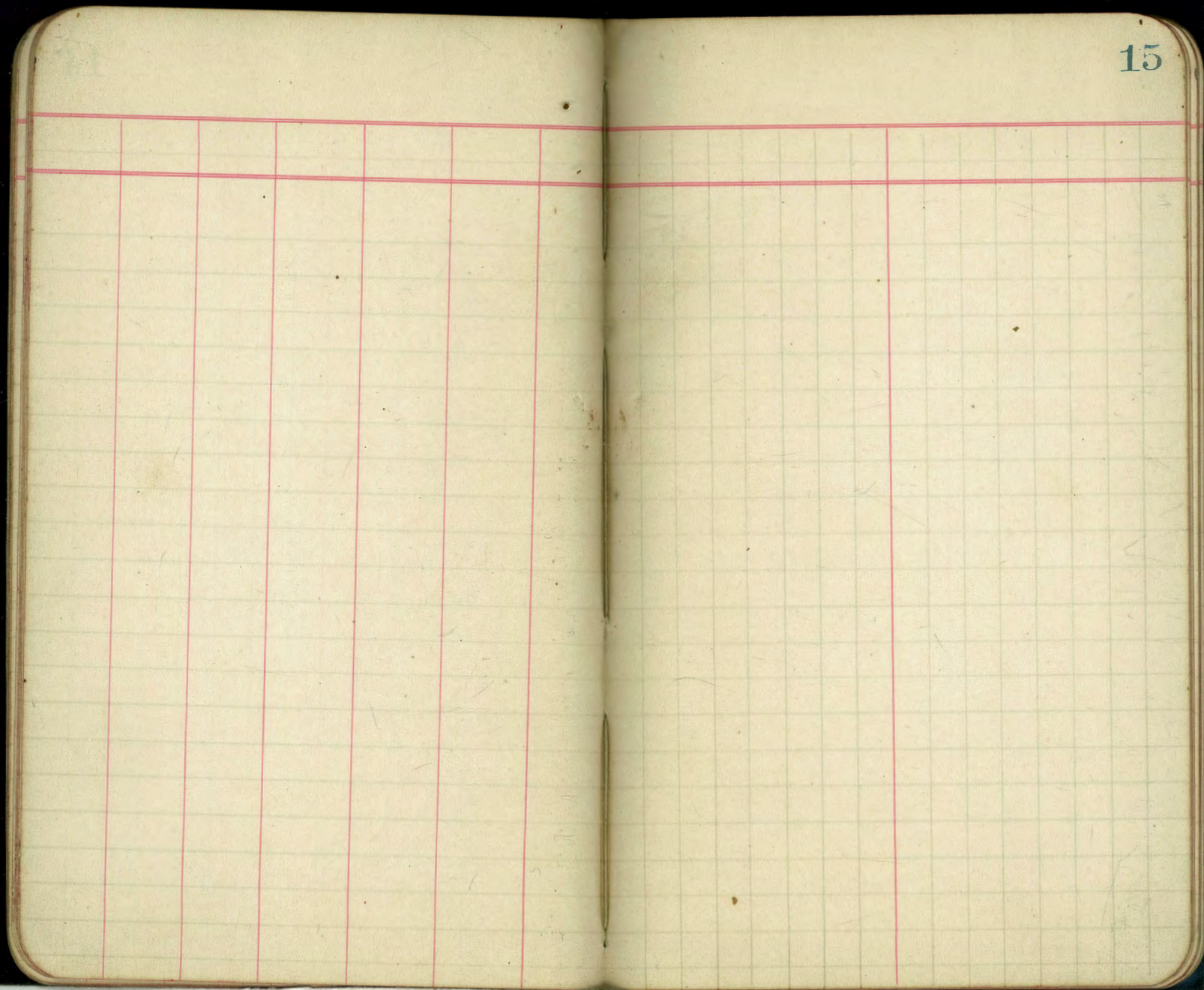


The image shows an open notebook with two pages. The pages are cream-colored and feature light blue horizontal ruling. The left page is divided into six vertical columns by five red lines. The right page is divided into two vertical columns by one red line. The number '9' is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

The image shows an open notebook with two blank ledger pages. The pages are cream-colored and feature a grid of red and blue lines. The left page is divided into 10 columns by vertical red lines and 20 rows by horizontal blue lines. The right page is also divided into 10 columns by vertical red lines and 20 rows by horizontal blue lines. The number '10' is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

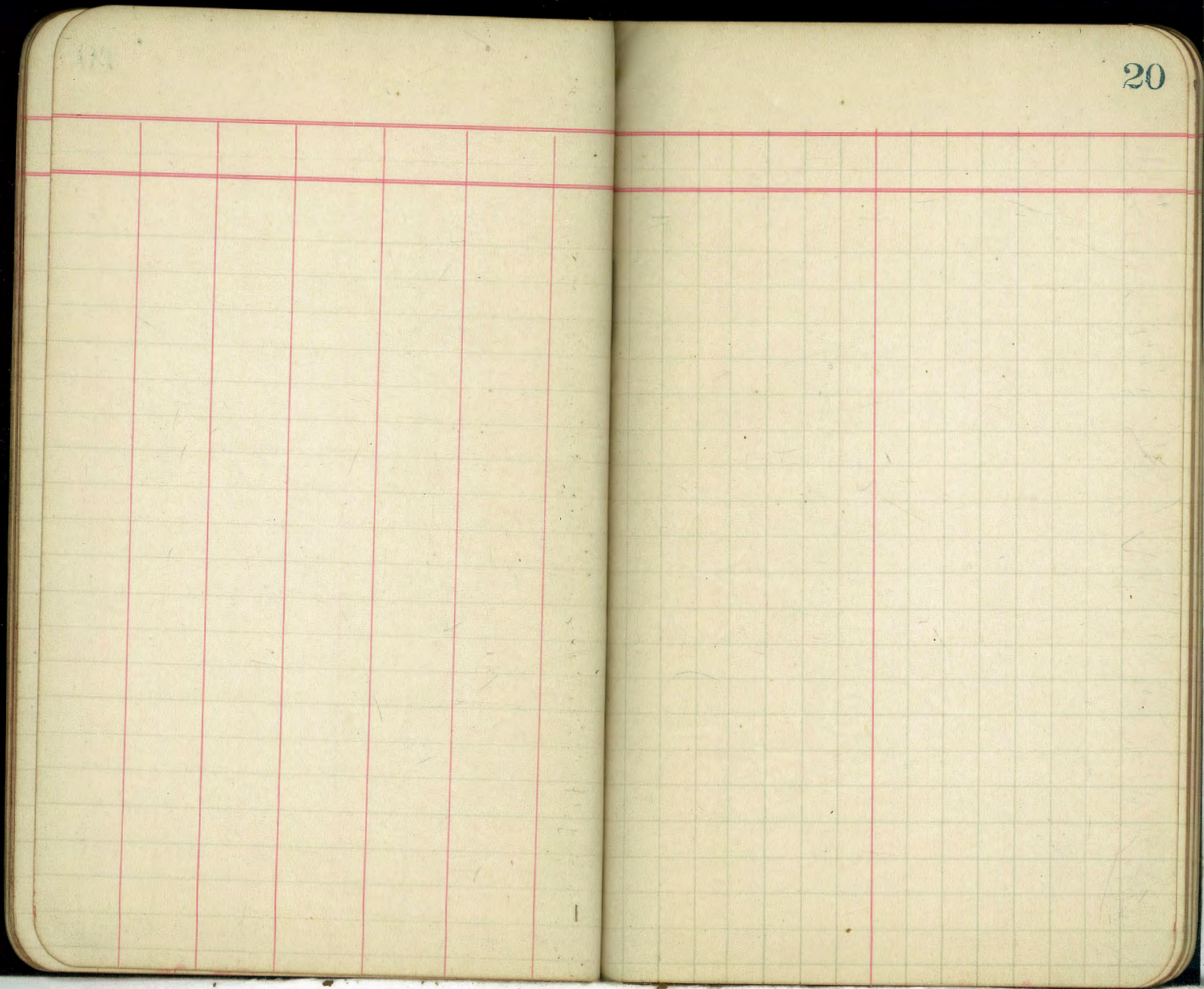
The image shows an open notebook with two pages. The left page is ruled with horizontal lines and has five vertical red lines, creating six columns. The right page is ruled with horizontal lines and has one vertical red line, creating two columns. The number '13' is printed in the top right corner of the right page. The pages are cream-colored and show some signs of age and wear.

The image shows an open notebook with two pages. The left page is ruled with light blue horizontal lines and features a vertical red margin line on the left side and a horizontal red header line near the top. The right page is also ruled with light blue horizontal lines and features a vertical red margin line on the left side and a horizontal red header line near the top. The number '14' is printed in the top right corner of the right page. The pages are otherwise blank.



The image shows an open notebook with two blank pages. The pages are cream-colored and feature light blue horizontal ruling. The left page has a vertical red margin line on the left side, and the right page has a vertical red margin line on the right side. The number '18' is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

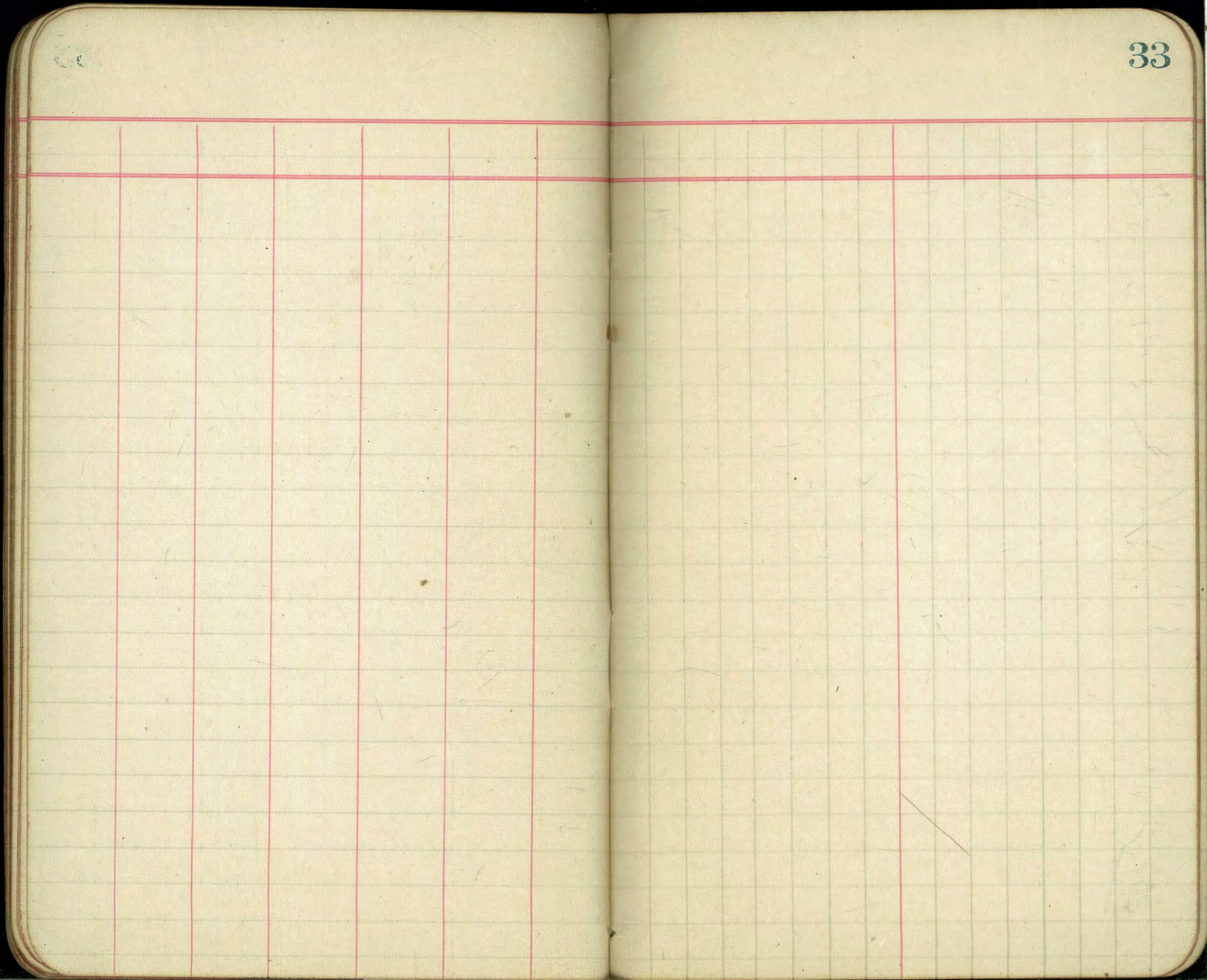
The image shows an open notebook with two blank ledger pages. The left page is ruled with 6 vertical red lines, creating 7 columns of varying widths. The right page is ruled with 10 vertical red lines, creating 11 columns of varying widths. Both pages have horizontal blue lines for rows. The pages are cream-colored and show signs of age and use.



The image shows an open notebook with two pages. The left page is ruled with horizontal lines and has five vertical red lines, creating six columns. The right page is ruled with horizontal lines and has one vertical red line, creating two columns. The number 22 is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. The left page has a vertical red margin line on the left side, and the right page has a vertical red margin line on the right side. The number '23' is printed in the top right corner of the right page. The notebook is placed on a white surface, and the background is dark.

The image shows an open notebook with two blank pages. The pages are cream-colored and feature light blue horizontal ruling. The right page is numbered '32' in the top right corner. The notebook is placed on a white surface against a black background.



33

13th

street running North

from 1 street-

39

4/11

e

7439 Gov 3 running West for 1st

Thirteenth Street & Sunningway North

W	E				
			South line of	4+94	7+21
					6+95
2+37 1/2		2+39 1/2		4+69 1/2	6+99
		2+18 1/2		4+45 1/2	6+69
		1+88 1/2		4+21 1/2	6+42 1/2
		1+68 1/2		3+61	5+79 1/2
		1+39 1/2		3+59	5+79 1/2
		1+37 1/2			6+21
		1+15	South line of	3+41	5+95 1/2
		0+86 1/2		3+14	5+70 1/2
		0+65 1/2		2+89 1/2	5+68 1/2
		0+63 1/2		2+87 1/2	5+44
		0+34		2+65 1/2	5+44
		0+32		2+58 1/2	5+20
				5+18	
0+35			property line of	L + 13 th	Sunningway North

12[#] street running North

from C street

W E

	39+69 $\frac{1}{2}$	
39+69 $\frac{1}{2}$	42+20	End of pipe south
	39+45	41+95
39+43	41+93	
	39+20 $\frac{1}{2}$	41+68 $\frac{1}{2}$
39+18 $\frac{1}{2}$	41+66 $\frac{1}{2}$	
		41+44 $\frac{1}{2}$
South line B	41+42 $\frac{1}{2}$	
38+40 $\frac{1}{2}$	41+20	
	38+15	41+14
38+13		40+94
	37+90	40+92
37+88		40+70
	37+55	40+68
37+53		40+44
	37+39 $\frac{1}{2}$	40+42
37+37 $\frac{1}{2}$		40+19 $\frac{1}{2}$
	37+15	40+16
37+13		39+94
		39+92

line of street

12th street running North from E street

W	S	W			
					6000
	32409		34435		36489
32407		34433		36467	
	31484 1/2		34409 1/2		36465
31482 1/2		34407 1/2		36463	
	31460		33485		36439
31458		33483		36437	
30499 1/2	6m of running West for D st				36446
South line D			33459 1/2	36442 1/2	
30480		33457 1/2		36440 1/2	
	30455 1/2		33435	36438 1/2	
30433 1/2		33433		36434	
	30430		33409	36432	
30428		33407		36440	North line E st
	30404		32485	36438	
30402		32483		34479	6m of running West for E street
	29499 1/2		32481		
29497 1/2		32459	South line E st		
	29455		32455	34460	End
29453		32433			

12th street running North

from F street

W	E		
	24+23	26+49	29+29
24+21	25+17	29+27	600
	23+99	26+25	29+05
23+97	26+23	29+03	
23+97	6 in by running W for F street		
			28+99
South side F st		26+00	28+97
23+20	25+98		26+54
	22+95	25+94	26+52
22+93	25+92		28+80
	22+98	25+49	28+28
22+66	25+47		28+04
	22+44	25+25	28+02
22+42	25+23		27+80
	22+22	24+99	27+78
22+18	24+97	27+18	6 in by running West for E st
	21+94	24+75	South side E street
21+92	24+73	27+00	6 in
	21+70	24+50	26+75
21+68	24+48	26+73	

12th Street Running North of J Street

W	E	W	E	W	
	17+89				21+44 over
17+87				21+42	
	17+65	Intersia of street			21+20
17+63		19+40	Int	21+18	
	17+39		19+14		20+96
17+37		19+12		20+94	
	17+15		18+90		20+70
17+13		18+88		20+68	
	16+90		18+65		20+44 $\frac{1}{2}$
16+88		18+63		20+42 $\frac{1}{2}$	
	16+64		18+39 $\frac{1}{2}$		20+20 $\frac{1}{2}$
16+62		18+37 $\frac{1}{2}$		20+18 $\frac{1}{2}$	
	16+40		18+15		19+60 $\frac{1}{2}$ in for J street East
16+38		18+13		19+58 $\frac{1}{2}$ in for J street West	
15+63	6 in of running West for H st				
Intersia		start line of H street			
15+40					
	15+15 $\frac{1}{2}$				
15+13 $\frac{1}{2}$					

12th sheet running North of L street

W E

12x63 12x65 14x89 14x87

12x41 14x65 12x39 14x63

11x79 6m by running East for J Street
11x77 6m by running West for J Street

South side of street 14x37
11x58 Jan 14x142

11x342 14x122 11x322 13x962

11x102 13x882 11x082 13x65

10x84 13x53 10x82 13x40

10x592 13x38 10x572 13x14

10x35 13x12 10x33 12x90

12x88

2nd running North of

S

90 E

8158 8+60 North line of foot

8199 6 m by " East
7199 6 m by running West of road

South side of road

7180 7 m 10x09 1/2 over

7152 1/2	7154 1/2	10+07 1/2	9+85
9+28	7+30	9+83	9+59 1/2
7+02 1/2	7+04 1/2	9+57 1/2	9+35
6+78	8+80	9+33	9+09
6+52 1/2	6+54 1/2	9+07	8+85
		8+80	

12th street North of

12 street among North

WN	E	WN	E
	8+49 1/2	6+28	6+30
3+47 1/2			6+05-
	3+25-	6+09	over
3+23			5+80
	2+99 1/2	5+78	
2+97 1/2			5+55-
	2+75	5+58	
2+73			5+30
	2+49	5+28	
2+47			5+04
	2+25-	5+02	
2+23			4+79 North line of K sheet
	1+99 1/2	4+77	
1+97 1/2		4+19	6 in of for K st among West
	1+75		
1+73			
	1+49		
1+47			
	1+25-		
1+20			
1+07			

South side K st
3+98 Fin

Start the pipe on 12th on this side of L on this side of track

12th street -

Fuel

48

7x09 end of pipe on 12th street

7x02

7x00

6x97½

6x95½

6x52½

6x50½

6x28

6x24

6x02

6x00

taker down

12th Street North of N Street 42

		5+98	
	2+73	5+76	
2+71		5+52	
	2+48	5+50	
2+46		5+27 4	
	2+28	5+25 2	
2+21		5+03	
	1+99	5+01	
1+99		4+77	
	1+73	4+75	
1+71		4+52	
	1+48	4+50	
1+46		4+29	North line
	1+22	4+24	
1+20			
	0+98	3+46	South line of
0+98			
	0+71	3+22	
0+69 ¹ / ₂		3+20	
	0+48	2+98	
0+46		2+56	

of the street

the Nth

12^{ME} 11

2+78 5+76

2+71

2+48 5+50

2+46

2+28 5+25 2

2+21

1+99 5+01

1+99

1+78 4+75

1+71

1+48 4+50

1+46

1+22 4+24

1+20

0+98 | 3+6

0+98

0+91 2

0+69 2

3+20

0+48

0+46

2+56

John Lemon

32 ft from building
on Fifth St. De & No 1040

Cosmopolitan Hotel

10 + 120 Fifth Street Connected

No 541 E side

No 529 9 x 60 E side

Connected

Dusk Tank

Sewer

TRAVERSE TABLE FOR TRANSIT BOOK,
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	81
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	81
2	99.94	3.49	99.92	3.98	99.91	4.36	99.88	4.80	81
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	81
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	81
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	81
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	81
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	81
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	81
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	71
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	71
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	71
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	71
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	71
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	71
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	71
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	71
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	71
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	61
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	61
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	61
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	61
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	61
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	61
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	61
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	61
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.50	50.00	86.38	50.38	86.16	50.75	85.94	51.13	60
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	51
32	84.80	52.99	84.57	53.36	84.34	53.78	84.10	54.10	51
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	51
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	51
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	51
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	51
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	51
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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