14	15	16	17	18	19	20	t Year
0	0	0	0	0	0	0	1941
0	0	1	1	1	1	1	1942
1	1	1	1	1	1	1	1943
1	1	1	1	1	1	1	1944
1	1	1	1	2	2	2	1945
1	2	2	2	2	2	2	1946
2	2	2	2	2	2	2	1947
2	2	2	2	2	3	3	1948
2	2	2	3	3	3	3	1949
2	2	3	3	3	3	3	1950
3	3	3	3	3	3	4	1951
3	3	3	3	4	4	4	1952
3	3	3	4	4	4	4	1953
3	4	4	4	4	4	5	1954
4	4	4	4	4	5	5	1955
4	4	4	5	5	5	5	1956
4	4	5	5	5	5	6	1957
4	4	5	5	5	6	6	1958
4	5	5	5	6	6	6	1959
5	5	5	6	6	6	7	1960
5	5	6	6	6	7	7	1961
5	6	6	6	7	7	7	1962
5	6	6	7	7	7	8	1963
6	6	6	7	7	8	8	1964
6	6	7	7	8	8	8	1965
6	6	7	7	8	8	9	1966
6	7	7	8	8	9	9	1967
7	7	7	8	8	9	9	1968
7	7	8	8	9	9	10	1969
7	8	8	8	9	10	10	1970
7	8	8	9	9	10	10	1971
7	8	9	9	10	10	11	1972
8	8	9	9	10	10	11	1973
8	8	9	10	10	11	11	1974
8	9	9	10	10	11	12	1975
8	9	10	10	11	11	12	1976
9	9	10	10	11	12	12	1977
9	10	10	11	11	12	13	1978
9	10	10	11	12	12	13	1979
9	10	11	11	12	13	13	1980
10	10	11	12	12	13	14	1981
10	10	11	12	13	13	14	1982
10	11	11	12	13	14	14	1983
10	11	12	12	13	14	15	1984
10	11	12	13	14	14	15	1985
11	12	12	13	14	15	15	1986
11	12	13	13	14	15	16	1987
11	12	13	14	14	15	16	1988
11	12	13	14	15	16	16	1989
12	12	13	14	15	16	17	1990
12	13	14	14	15	16	17	1991
12	13	14	15	16	16	17	1992
13	13	14	15	16	17	18	1993
13	14	14	15	16	17	18	1994
13	14	15	16	16	17	18	1995
13	14	15	16	17	18	19	1996
13	14	15	16	17	18	19	1997
14	14	15	16	17	18	19	1998
14	15	16	17	18	19	20	1999
14	15	16	17	18	19	20	2000

Latitude of Destination	Change of Longitude									Latitude of Destination
	5° 10° 15°	20° 25° 30°	35° 40° 45°	50° 55° 60°	65° 70° 75°	80° 85° 90°	
N. 60°	1 2 3	4 5 6	7 8 9	10 11 12	14 15 16	18 19 21	S. 60°
55	1 2 3	4 4 5	6 7 8	9 10 12	13 14 15	17 18 20	55
50	1 2 2	3 4 5	6 7 8	9 10 11	12 13 14	15 17 18	50
45	1 1 2	3 4 4	5 6 7	8 9 10	11 12 13	14 15 17	45
40	1 1 2	3 3 4	5 5 6	7 8 9	10 11 12	13 14 15	40
N. 35	1 1 2	2 3 4	4 5 5	6 7 8	8 9 10	11 12 14	S. 35
30	0 1 2	2 3 3	4 4 5	5 6 7	7 8 9	10 11 12	30
25	0 1 1	2 2 3	3 4 4	5 5 6	6 7 8	8 9 10	25
20	0 1 1	1 2 2	3 3 3	4 4 5	5 6 6	7 8 8	20
15	0 1 1	1 1 2	2 2 3	3 3 4	4 5 5	6 6 7	15
N. 10	0 0 1	1 1 1	1 2 2	2 2 3	3 3 4	4 4 5	S. 10
N. 5	0 0 0	1 1 1	1 1 1	1 2 2	2 2 2	3 3 3	S. 5
0	0 0 0	0 0 0	0 0 1	1 1 1	1 1 1	1 1 1	0
S. 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 *1	N. 5
10	0 0 0	0 0 *1	*1 *1 *1	*1 *1 *1	*1 *2 *2	*2 *2 *2	10
S. 15	0 0 0	*1 *1 *1	*1 *1 *2	*2 *2 *2	*3 *3 *3	*3 *4 *4	N. 15
20	0 0 *1	*1 *1 *1	*2 *2 *2	*3 *3 *3	*4 *4 *4	*5 *5 *6	20
25	0 *1 *1	*1 *2 *2	*2 *3 *3	*3 *4 *4	*5 *5 *6	*6 *7 *8	25
30	0 *1 *1	*2 *2 *2	*3 *3 *4	*4 *5 *5	*6 *7 *7	*8 *9*10	30
35	0 *1 *1	*2 *2 *3	*3 *4 *4	*5 *6 *6	*7 *8 *9	*9*10*11	35
S. 40	*1 *1 *2	*2 *3 *3	*4 *5 *5	*6 *7 *7	*8 *9*10	*11*12*13	N. 40
45	*1 *1 *2	*3 *3 *4	*5 *5 *6	*7 *8 *8	*9*10*11	*12*13*15	45
50	*1 *1 *2	*3 *4 *4	*5 *6 *7	*8 *8 *9	*10*11*13	*14*15*16	50
55	*1 *2 *2	*3 *4 *5	*6 *7 *7	*8 *9*10	*12*13*14	*15*16*18	55
S. 60	*1 *2 *3	*4 *4 *5	*6 *7 *8	*9*10*11	*13*14*15	*16*18*19	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 2°, but it may be used for any place of departure between latitudes 0° and 4°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between 0° and N. 4°, and the one on the right when the place of departure lies between 0° and S. 4°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles ; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

16	17	18	19	20	*t* Year
0	0	0	0	0	1941
1	1	1	1	1	1942
1	1	1	1	1	1943
1	1	1	1	1	1944
1	1	2	2	2	1945
2	2	2	2	2	1946
2	2	2	2	2	1947
2	2	2	3	3	1948
2	3	3	3	3	1949
3	3	3	3	3	1950
3	3	3	3	4	1951
3	3	4	4	4	1952
3	4	4	4	4	1953
4	4	4	4	5	1954
4	4	4	5	5	1955
4	5	5	5	5	1956
5	5	5	5	6	1957
5	5	5	6	6	1958
5	5	6	6	6	1959
5	6	6	6	7	1960
6	6	6	7	7	1961
6	6	7	7	7	1962
6	7	7	7	8	1963
6	7	7	8	8	1964
7	7	8	8	8	1965
7	7	8	8	9	1966
7	8	8	9	9	1967
7	8	8	9	9	1968
8	8	9	9	10	1969
8	8	9	10	10	1970
8	9	9	10	10	1971
8	9	10	10	11	1972
8	9	10	10	11	1973
8	9	10	11	11	1974
9	9	10	11	12	1975
9	10	10	11	12	1976
9	10	10	11	12	1977
10	10	11	12	13	1978
10	10	11	12	13	1979
10	11	11	12	13	1980
10	11	12	13	14	1981
10	11	12	13	14	1982
11	11	12	13	14	1983
11	12	12	13	14	1984
11	12	13	14	15	1985
12	12	13	14	15	1986
12	13	13	14	15	1987
12	13	14	14	15	1988
12	13	14	15	16	1989
12	13	14	15	16	1990
13	14	14	15	16	1991
13	14	15	16	16	1992
13	14	15	16	17	1993
14	14	15	16	17	1994
14	15	16	16	17	1995
14	15	16	17	18	1996
14	15	16	17	18	1997
14	15	16	17	18	1998
15	16	17	18	19	1999
15	16	17	18	19	2000

Latitude of Destination	Change of Longitude 5° 10° 15°	20° 25° 30°	35° 40° 45°	50° 55° 60°	65° 70° 75°	80° 85° 90°	Latitude of Destination
	° ° °	° ° °	° ° °	° ° °	° ° °	° ° °	
N. 60	1 2 3	4 5 6	8 9 10	11 12 14	15 16 18	19 21 23	S. 60
55	1 2 3	4 5 6	7 8 9	10 12 13	14 15 17	18 20 22	55
50	1 2 3	4 5 6	7 8 9	10 11 12	13 15 16	17 19 20	50
45	1 2 3	3 4 5	6 7 8	9 10 11	12 13 15	16 18 19	45
40	1 2 2	3 4 5	6 6 7	8 9 10	11 12 14	15 16 18	40
N. 35	1 1 2	3 4 4	5 6 7	8 8 9	10 11 12	14 15 16	S. 35
30	1 1 2	3 3 4	5 5 6	7 8 8	9 10 11	12 13 15	30
25	1 1 2	2 3 3	4 5 5	6 7 7	8 9 10	11 12 13	25
20	0 1 1	2 2 3	4 4 5	5 6 7	7 8 9	10 10 11	20
15	0 1 1	2 2 3	3 4 4	4 5 6	6 7 7	8 9 10	15
N. 10	0 1 1	1 2 2	3 3 3	4 4 5	5 6 6	7 7 8	S. 10
N. 5	0 1 1	1 1 2	2 2 3	3 3 4	4 4 5	5 6 6	S. 5
0	0 0 1	1 1 1	1 2 2	2 2 3	3 3 3	4 4 4	0
S. 5	0 0 0	1 1 1	1 1 1	1 2 2	2 2 2	2 2 3	N. 5
10	0 0 0	0 0 0	0 0 0	1 1 1	1 1 1	1 1 1	10
S. 15	0 0 0	0 0 *1	*1 *1 *1	*1 *1 *1	0 *1 *1	*1 *1 *1	N. 15
20	0 0 0	0 0 *1	*1 *1 *1	*2 *2 *2	*2 *2 *2	*2 *3 *3	20
25	0 0 *1	*1 *1 *1	*1 *1 *2	*2 *2 *2	*3 *3 *3	*4 *4 *5	25
30	0 0 *1	*1 *1 *2	*2 *2 *2	*3 *3 *4	*4 *4 *5	*5 *6 *7	30
35	0 *1 *1	*1 *2 *2	*2 *3 *3	*4 *4 *5	*5 *6 *6	*7 *8 *9	35
S. 40	0 *1 *1	*2 *2 *3	*3 *4 *4	*5 *5 *6	*6 *7 *8	*9 *9*10	N. 40
45	0 *1 *2	*2 *3 *3	*4 *4 *5	*5 *6 *7	*8 *8 *9	*10*11*12	45
50	*1 *1 *2	*2 *3 *4	*4 *5 *6	*6 *7 *8	*9*10*11	*12*13*14	50
55	*1 *1 *2	*3 *3 *4	*5 *6 *6	*7 *8 *9	*10*11*12	*13*14*16	55
S. 60	*1 *2 *2	*3 *4 *5	*6 *6 *7	*8 *9*10	*11*12*13	*15*16*17	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 7°, but it may be used for any place of departure between latitudes 5° and 9°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 5° and N. 9°, and the one on the right when the place of departure lies between S. 5° and S. 9°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

5	16	17	18	19	20	*t* Year
0	0	0	0	0	0	1941
0	1	1	1	1	1	1942
1	1	1	1	1	1	1943
1	1	1	1	1	1	1944
1	1	1	2	2	2	1945
2	2	2	2	2	2	1946
2	2	2	2	2	2	1947
2	2	2	2	3	3	1948
2	2	3	3	3	3	1949
2	3	3	3	3	3	1950
3	3	3	3	3	4	1951
3	3	3	4	4	4	1952
3	3	4	4	4	4	1953
4	4	4	4	4	5	1954
4	4	4	4	5	5	1955
4	4	5	5	5	5	1956
4	5	5	5	5	6	1957
4	5	5	5	6	6	1958
5	5	5	6	6	6	1959
5	5	6	6	6	7	1960
5	6	6	6	7	7	1961
5	6	6	7	7	7	1962
5	6	7	7	7	8	1963
5	6	7	7	8	8	1964
5	7	7	8	8	8	1965
5	7	7	8	8	9	1966
7	7	8	8	9	9	1967
7	7	8	8	9	9	1968
7	8	8	9	9	10	1969
8	8	8	9	10	10	1970
8	8	9	9	10	10	1971
8	9	9	10	10	11	1972
8	9	9	10	10	11	1973
8	9	10	10	11	11	1974
9	9	10	10	11	12	1975
9	10	10	11	11	12	1976
9	10	10	11	12	12	1977
0	10	11	11	12	13	1978
0	10	11	12	12	13	1979
0	11	11	12	13	13	1980
0	11	12	12	13	14	1981
0	11	12	13	13	14	1982
1	11	12	13	14	14	1983
1	12	12	13	14	15	1984
1	12	13	14	14	15	1985
2	12	13	14	15	15	1986
2	13	13	14	15	16	1987
2	13	14	14	15	16	1988
2	13	14	15	16	16	1989
2	13	14	15	16	17	1990
3	14	14	15	16	17	1991
3	14	15	16	16	17	1992
3	14	15	16	17	18	1993
4	14	15	16	17	18	1994
4	15	16	16	17	18	1995
4	15	16	17	18	19	1996
4	15	16	17	18	19	1997
4	15	16	17	18	19	1998
5	16	17	18	19	20	1999
5	16	17	18	19	20	2000

Latitude of Destination	Change of Longitude																		Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60°	1	2	3	5	6	7	8	10	11	12	13	15	16	18	19	21	23	24	S. 60°
55	1	2	3	4	6	7	8	9	10	12	13	14	16	17	18	20	22	23	55
50	1	2	3	4	5	6	7	9	10	11	12	13	15	16	18	19	21	22	50
45	1	2	3	4	5	6	7	8	9	10	11	13	14	15	17	18	20	21	45
40	1	2	3	4	5	6	6	7	9	10	11	12	13	14	16	17	18	20	40
N. 35	1	2	3	3	4	5	6	7	8	9	10	11	12	13	15	16	17	19	S. 35
30	1	2	2	3	4	5	6	6	7	8	9	10	11	12	13	15	16	17	30
25	1	1	2	3	4	4	5	6	7	7	8	9	10	11	12	13	15	16	25
20	1	1	2	3	3	4	5	5	6	7	8	8	9	10	11	12	13	14	20
15	1	1	2	2	3	3	4	5	5	6	7	7	8	9	10	11	12	13	15
N. 10	0	1	1	2	2	3	4	4	5	5	6	6	7	8	9	9	10	11	S. 10
N. 5	0	1	1	2	2	3	3	4	4	4	5	6	6	7	7	8	9	9	S. 5
0	0	1	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	8	0
S. 5	0	1	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	N. 5
10	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	10
S. 15	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	N. 15
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
25	0	0	0	0	0	0	0	0	0	0	0	*1	*1	*1	*1	*1	*1	*2	25
30	0	0	0	0	*1	*1	*1	*1	*1	*1	*1	*2	*2	*2	*2	*3	*3	*4	30
35	0	0	*1	*1	*1	*1	*1	*2	*2	*2	*2	*3	*3	*4	*4	*4	*5	*6	35
S. 40	0	*1	*1	*1	*1	*2	*2	*2	*3	*3	*4	*4	*4	*5	*6	*6	*7	*8	N. 40
45	0	*1	*1	*1	*2	*2	*3	*3	*4	*4	*5	*5	*6	*6	*7	*8	*9	*10	45
50	0	*1	*1	*2	*2	*3	*3	*4	*4	*5	*6	*6	*7	*8	*9	*9	*10	*12	50
55	*1	*1	*2	*2	*3	*3	*4	*5	*5	*6	*7	*7	*8	*9	*10	*11	*12	*13	55
S. 60	*1	*1	*2	*3	*3	*4	*5	*5	*6	*7	*8	*9	*10	*11	*12	*13	*14	*15	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 12°, but it may be used for any place of departure between latitudes 10° and 14°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 10° and N. 14°, and the one on the right when the place of departure lies between S. 10° and S. 14°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles ; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude																		Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
N. 60	1	3	4	5	6	8	9	10	12	13	15	16	18	19	21	22	24	26	S. 60
55	1	2	4	5	6	7	9	10	11	13	14	15	17	18	20	22	23	25	55
50	1	2	3	5	6	7	8	9	11	12	13	15	16	18	19	21	23	24	50
45	1	2	3	4	6	7	8	9	10	11	13	14	15	17	18	20	22	23	45
40	1	2	3	4	5	6	7	8	10	11	12	13	15	16	18	19	21	22	40
N. 35	1	2	3	4	5	6	7	8	9	10	11	13	14	15	17	18	20	21	S. 35
30	1	2	3	4	5	6	6	7	8	10	11	12	13	14	16	17	18	20	30
25	1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	16	17	19	25
20	1	2	2	3	4	5	6	6	7	8	9	10	11	12	13	15	16	17	20
15	1	1	2	3	4	4	5	6	7	7	8	9	10	11	12	13	14	16	15
N. 10	1	1	2	3	3	4	5	5	6	7	8	8	9	10	11	12	13	14	S. 10
N. 5	1	1	2	2	3	3	4	5	5	6	7	7	8	9	10	11	12	13	S. 5
0	0	1	2	2	3	3	4	4	5	5	6	6	7	8	8	9	10	11	0
S. 5	0	1	1	2	2	3	3	4	4	4	5	6	6	7	7	8	8	9	N. 5
10	0	1	1	1	2	2	3	3	3	4	4	4	5	5	6	6	7	7	10
S. 15	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	5	5	5	N. 15
20	0	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	20
25	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	25
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
35	0	0	0	0	0	0	0	0	*1	*1	*1	*1	*1	*1	*2	*2	*2	*3	35
S. 40	0	0	0	*1	*1	*1	*1	*1	*1	*2	*2	*2	*2	*3	*3	*4	*4	*5	N. 40
45	0	0	*1	*1	*1	*1	*2	*2	*2	*3	*3	*3	*4	*4	*5	*5	*6	*7	45
50	0	*1	*1	*1	*2	*2	*2	*3	*3	*4	*4	*5	*5	*6	*6	*7	*8	*9	50
55	0	*1	*1	*2	*2	*3	*3	*4	*4	*5	*5	*6	*7	*7	*8	*9	*10	*11	55
S. 60	*1	*1	*2	*2	*3	*3	*4	*4	*5	*6	*6	*7	*8	*9	*10	*11	*12	*13	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 17°, but it may be used for any place of departure between latitudes 15° and 19° Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 15° and N. 19°, and the one on the right when the place of departure lies between S. 15° and S. 19°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude									Latitude of Destination
	5°	10°	15°	20° 25° 30°	35° 40° 45°	50° 55° 60°	65° 70° 75°	80° 85° 90°		
°	°	°	°	° ° °	° ° °	° ° °	° ° °	° ° °		°
N. 60	1	3	4	5 7 8	10 11 13	14 16 17	19 20 22	24 26 28		S. 60
55	1	3	4	5 7 8	9 11 12	14 15 17	18 20 22	23 25 27		55
50	1	3	4	5 6 8	9 10 12	13 15 16	18 19 21	23 25 26		50
45	1	2	4	5 6 7	9 10 11	13 14 16	17 19 20	22 24 26		45
40	1	2	3	5 6 7	8 10 11	12 13 15	16 18 19	21 23 25		40
N. 35	1	2	3	4 6 7	8 9 10	12 13 14	16 17 19	20 22 24		S. 35
30	1	2	3	4 5 6	7 9 10	11 12 13	15 16 18	19 21 22		30
25	1	2	3	4 5 6	7 8 9	10 11 13	14 15 17	18 20 21		25
20	1	2	3	4 5 6	7 8 9	10 11 12	13 14 16	17 18 20		20
15	1	2	3	3 4 5	6 7 8	9 10 11	12 13 15	16 17 19		15
N. 10	1	2	2	3 4 5	6 6 7	8 9 10	11 12 13	15 16 17		S. 10
N. 5	1	1	2	3 4 4	5 6 7	8 8 9	10 11 12	13 14 16		S. 5
0	1	1	2	3 3 4	5 5 6	7 8 8	9 10 11	12 13 14		0
S. 5	1	1	2	2 3 4	4 5 5	6 7 7	8 9 10	11 11 12		N. 5
10	0	1	2	2 3 3	4 4 5	5 6 6	7 8 8	9 10 11		10
S. 15	0	1	1	2 2 3	3 4 4	4 5 5	6 6 7	8 8 9		N. 15
20	0	1	1	1 2 2	3 3 3	4 4 4	5 5 6	6 6 7		20
25	0	1	1	1 1 2	2 2 2	3 3 3	4 4 4	4 5 5		25
30	0	0	1	1 1 1	1 2 2	2 2 2	2 2 3	3 3 3		30
35	0	0	0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1		35
S. 40	0	0	0	0 0 0	0 0 0	0 0 0	0 *1 *1	*1 *1 *2		N. 40
45	0	0	0	0 0 *1	*1 *1 *1	*1 *1 *2	*2 *2 *2	*3 *3 *4		45
50	0	0	*1	*1 *1 *1	*1 *2 *2	*2 *3 *3	*3 *4 *4	*5 *5 *6		50
55	0	*1	*1	*1 *1 *2	*2 *3 *3	*3 *4 *4	*5 *5 *6	*7 *7 *8		55
S. 60	0	*1	*1	*2 *2 *2	*3 *3 *4	*4 *5 *6	*6 *7 *8	*9*10*11		N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 22°, but it may be used for any place of departure between latitudes 20° and 24°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 20° and N. 24°, and the one on the right when the place of departure lies between S. 20° and S. 24°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude												Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60°	1	3	4	6	7	9	10	12	13	15	17	18	20	22	24	25	27	29	S. 60°
55	1	3	4	6	7	9	10	12	13	15	16	18	20	21	23	25	27	29	55
50	1	3	4	6	7	8	10	11	13	14	16	18	19	21	23	24	26	28	50
45	1	3	4	5	7	8	9	11	12	14	15	17	19	20	22	24	26	28	45
40	1	3	4	5	6	8	9	11	12	13	15	16	18	20	21	23	25	27	40
N. 35	1	2	4	5	6	7	9	10	11	13	14	16	17	19	21	22	24	26	S. 35
30	1	2	4	5	6	7	8	10	11	12	14	15	17	18	20	21	23	25	30
25	1	2	3	4	6	7	8	9	10	12	13	14	16	17	19	20	22	24	25
20	1	2	3	4	5	6	8	9	10	11	12	14	15	16	18	19	21	23	20
15	1	2	3	4	5	6	7	8	9	10	12	13	14	16	17	19	20	22	15
N. 10	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	19	20	S. 10
N. 5	1	2	3	4	4	5	6	7	8	9	10	11	12	14	15	16	17	19	S. 5
0	1	2	2	3	4	5	6	7	8	8	9	10	11	12	14	15	16	17	0
S. 5	1	1	2	3	4	4	5	6	7	8	9	9	10	11	12	13	15	16	N. 5
10	1	1	2	3	3	4	5	5	6	7	8	8	9	10	11	12	13	14	10
S. 15	1	1	2	2	3	4	4	5	5	6	7	8	8	9	10	11	11	12	N. 15
20	1	1	2	2	3	3	4	4	5	5	6	6	7	8	8	9	10	10	20
25	0	1	1	2	2	3	3	4	4	4	5	5	6	6	7	7	8	8	25
30	0	1	1	1	2	2	2	3	3	4	4	4	5	5	5	6	6	6	30
35	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	35
S. 40	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	N. 40
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*1	45
50	0	0	0	0	0	0	0	0	*1	*1	*1	*1	*1	*1	*2	*2	*3	*3	50
55	0	0	0	*1	*1	*1	*1	*1	*2	*2	*2	*2	*3	*3	*4	*4	*5	*6	55
S. 60	0	*1	*1	*1	*1	*2	*2	*2	*3	*3	*4	*4	*5	*5	*6	*6	*7	*8	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 27°, but it may be used for any place of departure between latitudes 25° and 29°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 25° and N. 29°, and the one on the right when the place of departure lies between S. 25° and S. 29°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

OF STARS

18	19	20	t Year
0	0	0	1941
1	1	1	1942
1	1	1	1943
1	1	1	1944
2	2	2	1945
2	2	2	1946
2	2	2	1947
2	3	3	1948
3	3	3	1949
3	3	3	1950
3	3	4	1951
4	4	4	1952
4	4	4	1953
4	4	5	1954
4	5	5	1955
5	5	5	1956
5	5	6	1957
5	6	6	1958
6	6	6	1959
6	6	7	1960
6	7	7	1961
7	7	7	1962
7	7	8	1963
7	8	8	1964
8	8	8	1965
8	8	9	1966
8	9	9	1967
8	9	9	1968
9	9	10	1969
9	10	10	1970
9	10	10	1971
10	10	11	1972
10	10	11	1973
10	11	11	1974
10	11	12	1975
11	11	12	1976
11	12	12	1977
11	12	13	1978
12	12	13	1979
12	13	13	1980
12	13	14	1981
13	13	14	1982
13	14	14	1983
13	14	15	1984
14	14	15	1985
14	15	15	1986
14	15	16	1987
14	15	16	1988
15	16	16	1989
15	16	17	1990
15	16	17	1991
16	16	17	1992
16	17	18	1993
16	17	18	1994
16	17	18	1995
17	18	19	1996
17	18	19	1997
17	18	19	1998
18	19	20	1999
18	19	20	2000

STA

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Latitude of Destination	Change of Longitude															Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60°	2	3	5	6	8	9	11	13	14	16	18	20	21	23	25	27	29	31	S. 60°
55	2	3	5	6	8	9	11	12	14	16	17	19	21	23	25	27	29	31	55
50	1	3	4	6	8	9	11	12	14	15	17	19	21	22	24	26	28	30	50
45	1	3	4	6	7	9	10	12	13	15	17	18	20	22	24	26	28	30	45
40	1	3	4	6	7	9	10	12	13	15	16	18	20	21	23	25	27	29	40
N. 35	1	3	4	5	7	8	10	11	13	14	16	17	19	21	23	24	26	28	S. 35
30	1	3	4	5	7	8	9	11	12	14	15	17	18	20	22	24	26	28	30
25	1	3	4	5	6	8	9	10	12	13	15	16	18	19	21	23	25	27	25
20	1	2	4	5	6	7	9	10	11	13	14	15	17	19	20	22	24	26	20
15	1	2	3	5	6	7	8	9	11	12	13	15	16	18	19	21	23	24	15
N. 10	1	2	3	4	5	7	8	9	10	11	13	14	15	17	18	20	22	23	S. 10
N. 5	1	2	3	4	5	6	7	8	10	11	12	13	15	16	17	19	20	22	S. 5
0	1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	18	19	21	0
S. 5	1	2	3	4	5	5	6	7	8	9	10	12	13	14	15	16	18	19	N. 5
10	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	10
S. 15	1	2	2	3	4	5	5	6	7	8	9	10	11	11	12	14	15	16	N. 15
20	1	1	2	3	3	4	5	6	6	7	8	9	9	10	11	12	13	14	20
25	1	1	2	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	25
30	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	9	9	10	30
35	0	1	1	2	2	3	3	3	4	4	5	5	6	6	6	7	7	8	35
S. 40	0	1	1	1	2	2	2	3	3	3	4	4	4	4	5	5	5	5	N. 40
45	0	0	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	45
50	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	50
55	0	0	0	0	0	0	0	0	0	0	0	*1	*1	*1	*1	*2	*2	*2	55
S. 60	0	0	0	*1	*1	*1	*1	*1	*1	*2	*2	*2	*3	*3	*3	*4	*5	*5	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 32°, but it may be used for any place of departure between latitudes 30° and 34°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 30° and N. 34°, and the one on the right when the place of departure lies between S. 30° and S. 34°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

		Year
0	0	1941
1	1	1942
1	1	1943
1	1	1944
2	2	1945
2	2	1946
2	2	1947
3	3	1948
3	3	1949
3	3	1950
3	4	1951
4	4	1952
4	4	1953
5	5	1954
5	5	1955
5	5	1956
6	6	1957
6	6	1958
6	6	1959
7	7	1960
7	7	1961
7	7	1962
8	8	1963
8	8	1964
8	8	1965
9	9	1966
9	9	1967
9	9	1968
10	10	1969
10	10	1970
10	10	1971
11	11	1972
11	11	1973
11	11	1974
12	12	1975
12	12	1976
12	12	1977
13	13	1978
13	13	1979
13	13	1980
14	14	1981
14	14	1982
14	14	1983
15	15	1984
15	15	1985
15	15	1986
16	16	1987
16	16	1988
16	16	1989
17	17	1990
17	17	1991
17	17	1992
18	18	1993
18	18	1994
18	18	1995
19	19	1996
19	19	1997
19	19	1998
20	20	1999
20	20	2000

5	16	17	18	19	20	*t* Year
0	0	0	0	0	0	1941
0	1	1	1	1	1	1942
1	1	1	1	1	1	1943
1	1	1	1	1	1	1944
1	1	1	2	2	2	1945
2	2	2	2	2	2	1946
2	2	2	2	2	2	1947
2	2	2	2	3	3	1948
2	2	3	3	3	3	1949
2	3	3	3	3	3	1950
3	3	3	3	3	4	1951
3	3	3	4	4	4	1952
3	3	4	4	4	4	1953
4	4	4	4	4	5	1954
4	4	4	4	5	5	1955
4	4	5	5	5	5	1956
4	5	5	5	5	6	1957
4	5	5	5	6	6	1958
5	5	5	6	6	6	1959
5	5	6	6	6	7	1960
5	6	6	6	7	7	1961
6	6	6	7	7	7	1962
6	6	7	7	7	8	1963
6	6	7	7	8	8	1964
6	7	7	8	8	8	1965
6	7	7	8	8	9	1966
7	7	8	8	9	9	1967
7	7	8	8	9	9	1968
7	8	8	9	9	10	1969
8	8	8	9	10	10	1970
8	8	9	9	10	10	1971
8	9	9	10	10	11	1972
8	9	9	10	10	11	1973
8	9	10	10	11	11	1974
9	9	10	10	11	12	1975
9	10	10	11	11	12	1976
9	10	10	11	12	12	1977
10	10	11	11	12	13	1978
10	10	11	12	12	13	1979
10	11	11	12	13	13	1980
10	11	12	12	13	14	1981
10	11	12	13	13	14	1982
11	11	12	13	14	14	1983
11	12	12	13	14	15	1984
11	12	13	14	14	15	1985
12	12	13	14	15	15	1986
12	13	13	14	15	16	1987
12	13	14	14	15	16	1988
12	13	14	15	16	16	1989
12	13	14	15	16	17	1990
13	14	14	15	16	17	1991
13	14	15	16	16	17	1992
13	14	15	16	17	18	1993
14	14	15	16	17	18	1994
14	15	16	16	17	18	1995
14	15	16	17	18	19	1996
14	15	16	17	18	19	1997
14	15	16	17	18	19	1998
15	16	17	18	19	20	1999
15	16	17	18	19	20	2000

Latitude of Destination	Change of Longitude																		Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
N. 60	2	3	5	7	8	10	12	13	15	17	19	21	23	24	26	28	30	33	S. 60
55	2	3	5	7	8	10	12	13	15	17	19	20	22	24	26	28	30	32	55
50	2	3	5	6	8	10	11	13	15	17	18	20	22	24	26	28	30	32	50
45	2	3	5	6	8	10	11	13	15	16	18	20	22	24	26	28	30	32	45
40	2	3	5	6	8	9	11	13	14	16	18	19	21	23	25	27	29	31	40
N. 35	1	3	4	6	8	9	11	12	14	16	17	19	21	23	25	27	29	31	S. 35
30	1	3	4	6	7	9	10	12	13	15	17	18	20	22	24	26	28	30	30
25	1	3	4	6	7	9	10	12	13	15	16	18	20	21	23	25	27	29	25
20	1	3	4	5	7	8	10	11	13	14	16	17	19	21	22	24	26	28	20
15	1	3	4	5	7	8	9	11	12	14	15	17	18	20	22	24	25	27	15
N. 10	1	2	4	5	6	8	9	10	12	13	14	16	18	19	21	23	24	26	S. 10
N. 5	1	2	4	5	6	7	8	10	11	12	14	15	17	18	20	22	23	25	S. 5
0	1	2	3	5	6	7	8	9	11	12	13	14	16	17	19	20	22	24	0
S. 5	1	2	3	4	5	6	8	9	10	11	12	14	15	16	18	19	21	23	N. 5
10	1	2	3	4	5	6	7	8	9	10	12	13	14	15	17	18	19	21	10
S. 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	19	N. 15
20	1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20
25	1	2	2	3	4	5	6	6	7	8	9	10	11	12	13	14	15	16	25
30	1	1	2	3	3	4	5	6	6	7	8	9	9	10	11	12	13	14	30
35	1	1	2	2	3	4	4	5	5	6	7	7	8	9	9	10	11	11	35
S. 40	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	N. 40
45	0	1	1	2	2	2	3	3	4	4	4	5	5	5	6	6	6	7	45
50	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	50
55	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	55
S. 60	0	0	0	0	0	0	0	0	0	0	0	0	0	*1	*1	*1	*2	*2	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 37°, but it may be used for any place of departure between latitudes 35° and 39°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 35° and N. 39°, and the one on the right when the place of departure lies between S. 35° and S. 39°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle to a Rhumb Line bearing	To convert a Rhumb Line to a Great Circle bearing
North	Westerly	Subtract	Add
North	Easterly	Add	Subtract
South	Westerly	Add	Subtract
South	Easterly	Subtract	Add

These rules refer to bearings measured from 000° T. in a clockwise direction. Where the figures are given in italics, preceded by an asterisk, the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

16	17	18	19	20	t Year
0	0	0	0	0	1941
1	1	1	1	1	1942
1	1	1	1	1	1943
1	1	1	1	1	1944
1	1	2	2	2	1945
2	2	2	2	2	1946
2	2	2	2	2	1947
2	2	2	3	3	1948
2	3	3	3	3	1949
3	3	3	3	3	1950
3	3	3	3	4	1951
3	3	4	4	4	1952
3	4	4	4	4	1953
4	4	4	4	5	1954
4	4	4	5	5	1955
4	5	5	5	5	1956
5	5	5	5	6	1957
5	5	5	6	6	1958
5	5	6	6	6	1959
5	6	6	6	7	1960
6	6	6	7	7	1961
6	6	7	7	7	1962
6	7	7	7	8	1963
6	7	7	8	8	1964
7	7	8	8	8	1965
7	7	8	8	9	1966
7	8	8	9	9	1967
7	8	8	9	9	1968
8	8	9	9	10	1969
8	8	9	10	10	1970
8	9	9	10	10	1971
9	9	10	10	11	1972
9	9	10	10	11	1973
9	10	10	11	11	1974
9	10	10	11	12	1975
10	10	11	11	12	1976
10	10	11	12	12	1977
10	11	11	12	13	1978
10	11	12	12	13	1979
11	11	12	13	13	1980
11	12	12	13	14	1981
11	12	13	13	14	1982
11	12	13	14	14	1983
12	12	13	14	15	1984
12	13	14	14	15	1985
12	13	14	15	15	1986
13	13	14	15	16	1987
13	14	14	15	16	1988
13	14	15	16	16	1989
13	14	15	16	17	1990
14	14	15	16	17	1991
14	15	16	16	17	1992
14	15	16	17	18	1993
14	15	16	17	18	1994
15	16	16	17	18	1995
15	16	17	18	19	1996
15	16	17	18	19	1997
15	16	17	18	19	1998
16	17	18	19	20	1999
16	17	18	19	20	2000

Latitude of Destination	Change of Longitude												Latitude of Destination
	5°	10°	15°	20° 25° 30°	35° 40° 45°	50° 55° 60°	65° 70° 75°	80° 85° 90°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
N. 60	2	4	5	7 9 11	12 14 16	18 20 22	24 26 28	30 32 34	S. 60
55	2	3	5	7 9 11	12 14 16	18 20 22	24 26 28	30 32 34	55
50	2	3	5	7 9 10	12 14 16	18 20 22	24 26 28	30 32 34	50
45	2	3	5	7 9 10	12 14 16	18 19 21	23 25 27	30 32 34	45
40	2	3	5	7 8 10	12 14 15	17 19 21	23 25 27	29 31 34	40
N. 35	2	3	5	7 8 10	12 13 15	17 19 21	23 25 27	29 31 33	S. 35
30	2	3	5	6 8 10	11 13 15	16 18 20	22 24 26	28 30 33	30
25	2	3	5	6 8 9	11 13 14	16 18 20	22 23 25	28 30 32	25
20	2	3	5	6 8 9	11 12 14	16 17 19	21 23 25	27 29 31	20
15	1	3	4	6 7 9	10 12 14	15 17 19	20 22 24	26 28 30	15
N. 10	1	3	4	6 7 9	10 12 13	15 16 18	20 21 23	25 27 29	S. 10
N. 5	1	3	4	5 7 8	10 11 13	14 16 17	19 21 22	24 26 28	S. 5
0	1	3	4	5 7 8	9 11 12	14 15 17	18 20 22	23 25 27	0
S. 5	1	2	4	5 6 8	9 10 12	13 14 16	17 19 21	22 24 26	N. 5
10	1	2	4	5 6 7	8 10 11	12 14 15	16 18 19	21 23 25	10
S. 15	1	2	3	4 6 7	8 9 10	12 13 14	15 17 18	20 21 23	N. 15
20	1	2	3	4 5 6	7 8 10	11 12 13	14 16 17	18 20 21	20
25	1	2	3	4 5 6	7 8 9	10 11 12	13 14 16	17 18 20	25
30	1	2	3	4 4 5	6 7 8	9 10 11	12 13 14	15 16 18	30
35	1	2	2	3 4 5	6 6 7	8 9 10	11 12 12	13 14 15	35
S. 40	1	1	2	3 3 4	5 6 6	7 8 8	9 10 11	11 12 13	N. 40
45	1	1	2	2 3 4	4 5 5	6 6 7	8 8 9	9 10 10	45
50	0	1	1	2 2 3	3 4 4	5 5 5	6 6 7	7 7 8	50
55	0	1	1	1 2 2	2 3 3	3 4 4	4 4 4	4 5 5	55
S. 60	0	0	1	1 1 1	1 1 2	2 2 2	2 2 2	2 2 1	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 42°, but it may be used for any place of departure between latitudes 40° and 44°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 40° and N. 44°, and the one on the right when the place of departure lies between S. 40° and S. 44°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles ; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

15	16	17	18	19	20	*t* Year
0	0	0	0	0	0	1941
0	1	1	1	1	1	1942
1	1	1	1	1	1	1943
1	1	1	1	1	1	1944
1	1	1	2	2	2	1945
2	2	2	2	2	2	1946
2	2	2	2	2	2	1947
2	2	2	2	3	3	1948
2	2	3	3	3	3	1949
2	3	3	3	3	3	1950
3	3	3	3	3	4	1951
3	3	3	4	4	4	1952
3	3	4	4	4	4	1953
4	4	4	4	4	5	1954
4	4	4	4	5	5	1955
4	4	5	5	5	5	1956
4	5	5	5	5	6	1957
4	5	5	5	6	6	1958
5	5	5	6	6	6	1959
5	5	6	6	6	7	1960
5	6	6	6	7	7	1961
6	6	6	7	7	7	1962
6	6	7	7	7	8	1963
6	6	7	7	8	8	1964
6	7	7	8	8	8	1965
6	7	7	8	8	9	1966
7	7	8	8	9	9	1967
7	7	8	8	9	9	1968
7	8	8	9	9	10	1969
8	8	8	9	10	10	1970
8	8	9	9	10	10	1971
8	9	9	10	10	11	1972
8	9	9	10	10	11	1973
8	9	10	10	11	11	1974
9	9	10	10	11	12	1975
9	10	10	11	11	12	1976
9	10	10	11	12	12	1977
10	10	11	11	12	13	1978
10	10	11	12	12	13	1979
10	11	11	12	13	13	1980
10	11	12	12	13	14	1981
10	11	12	13	13	14	1982
11	11	12	13	14	14	1983
11	12	12	13	14	15	1984
11	12	13	14	14	15	1985
12	12	13	14	15	15	1986
12	13	13	14	15	16	1987
12	13	14	14	15	16	1988
12	13	14	15	16	16	1989
12	13	14	15	16	17	1990
13	14	14	15	16	17	1991
13	14	15	16	16	17	1992
13	14	15	16	17	18	1993
14	14	15	16	17	18	1994
14	15	16	16	17	18	1995
14	15	16	17	18	19	1996
14	15	16	17	18	19	1997
14	15	16	17	18	19	1998
15	16	17	18	19	20	1999
15	16	17	18	19	20	2000

Latitude of Destination	Change of Longitude																		Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60°	2	4	6	7	9	11	13	15	17	19	21	23	25	27	29	32	34	36	S. 60°
55	2	4	6	7	9	11	13	15	17	19	21	23	25	27	29	32	34	36	55
50	2	4	6	7	9	11	13	15	17	19	21	23	25	27	29	32	34	36	50
45	2	4	5	7	9	11	13	15	17	19	21	23	25	27	29	31	34	36	45
40	2	4	5	7	9	11	13	15	17	19	21	23	25	27	29	31	34	36	40
N. 35	2	4	5	7	9	11	13	14	16	18	20	22	24	26	29	31	33	36	S. 35
30	2	3	5	7	9	11	12	14	16	18	20	22	24	26	28	30	33	35	30
25	2	3	5	7	9	10	12	14	16	18	20	22	24	26	28	30	32	35	25
20	2	3	5	7	8	10	12	14	15	17	19	21	23	25	27	29	32	34	20
15	2	3	5	6	8	10	12	13	15	17	19	21	23	25	27	29	31	33	15
N. 10	2	3	5	6	8	10	11	13	15	16	18	20	22	24	26	28	30	33	S. 10
N. 5	2	3	5	6	8	9	11	12	14	16	18	19	21	23	25	27	29	32	S. 5
0	1	3	4	6	7	9	10	12	14	15	17	19	21	22	24	26	28	31	0
S. 5	1	3	4	6	7	9	10	12	13	15	16	18	20	22	23	25	27	30	N. 5
10	1	3	4	5	7	8	10	11	13	14	16	17	19	21	22	24	26	28	10
S. 15	1	3	4	5	7	8	9	11	12	13	15	16	18	20	21	23	25	27	N. 15
20	1	2	4	5	6	7	9	10	11	13	14	16	17	19	20	22	24	25	20
25	1	2	3	5	6	7	8	9	11	12	13	15	16	17	19	20	22	24	25
30	1	2	3	4	5	6	8	9	10	11	12	13	15	16	17	19	20	22	30
35	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	20	35
S. 40	1	2	3	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	N. 40
45	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13	14	15	45
50	1	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	50
55	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	8	9	55
S. 60	0	1	1	2	2	2	3	3	3	4	4	4	5	5	5	5	5	5	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 47°, but it may be used for any place of departure between latitudes 45° and 49°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 45° and N. 49°, and the one on the right when the place of departure lies between S. 45° and S. 49°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

15	16	17	18	19	20	t Year
0	0	0	0	0	0	1941
0	1	1	1	1	1	1942
1	1	1	1	1	1	1943
1	1	1	1	1	1	1944
1	1	1	2	2	2	1945
2	2	2	2	2	2	1946
2	2	2	2	2	2	1947
2	2	2	2	3	3	1948
2	2	3	3	3	3	1949
2	3	3	3	3	3	1950
3	3	3	3	3	4	1951
3	3	3	4	4	4	1952
3	3	4	4	4	4	1953
4	4	4	4	4	5	1954
4	4	4	4	5	5	1955
4	4	5	5	5	5	1956
4	5	5	5	5	6	1957
4	5	5	5	6	6	1958
5	5	5	6	6	6	1959
5	5	6	6	6	7	1960
5	6	6	6	7	7	1961
6	6	6	7	7	7	1962
6	6	7	7	7	8	1963
6	6	7	7	8	8	1964
6	7	7	8	8	8	1965
6	7	7	8	8	9	1966
7	7	8	8	9	9	1967
7	7	8	8	9	9	1968
7	8	8	9	9	10	1969
8	8	8	9	10	10	1970
8	8	9	9	10	10	1971
8	9	9	10	10	11	1972
8	9	9	10	10	11	1973
8	9	10	10	11	11	1974
9	9	10	10	11	12	1975
9	10	10	11	11	12	1976
9	10	10	11	12	12	1977
0	10	11	11	12	13	1978
0	10	11	12	12	13	1979
0	11	11	12	13	13	1980
0	11	12	12	13	14	1981
0	11	12	13	13	14	1982
1	11	12	13	14	14	1983
1	12	12	13	14	15	1984
1	12	13	14	14	15	1985
2	12	13	14	15	15	1986
2	13	13	14	15	16	1987
2	13	14	14	15	16	1988
2	13	14	15	16	16	1989
2	13	14	15	16	17	1990
3	14	14	15	16	17	1991
3	14	15	16	16	17	1992
3	14	15	16	17	18	1993
4	14	15	16	17	18	1994
4	15	16	16	17	18	1995
4	15	16	17	18	19	1996
4	15	16	17	18	19	1997
4	15	16	17	18	19	1998
5	16	17	18	19	20	1999
5	16	17	18	19	20	2000

Latitude of Destination	Change of Longitude																		Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60	2	4	6	8	10	12	14	16	18	20	22	24	27	29	31	33	35	38	S. 60
55	2	4	6	8	10	12	14	16	18	20	22	24	27	29	31	33	36	38	55
50	2	4	6	8	10	12	14	16	18	20	22	24	27	29	31	34	36	38	50
45	2	4	6	8	10	12	14	16	18	20	22	24	27	29	31	33	36	38	45
40	2	4	6	8	10	12	14	16	18	20	22	24	26	29	31	33	36	38	40
N. 35	2	4	6	8	10	12	14	16	18	20	22	24	26	28	31	33	36	38	S. 35
30	2	4	6	8	10	11	13	15	17	19	22	24	26	28	30	33	35	38	30
25	2	4	6	7	9	11	13	15	17	19	21	23	26	28	30	32	35	37	25
20	2	4	5	7	9	11	13	15	17	19	21	23	25	27	30	32	34	37	20
15	2	4	5	7	9	11	13	15	17	19	21	23	25	27	29	31	34	36	15
N. 10	2	3	5	7	9	11	12	14	16	18	20	22	24	26	29	31	33	36	S. 10
N. 5	2	3	5	7	9	10	12	14	16	18	20	22	24	26	28	30	33	35	S. 5
0	2	3	5	7	8	10	12	14	15	17	19	21	23	25	27	29	32	34	0
S. 5	2	3	5	6	8	10	11	13	15	17	19	20	22	24	26	29	31	33	N. 5
10	2	3	5	6	8	9	11	13	14	16	18	20	22	24	26	28	30	32	10
S. 15	2	3	4	6	8	9	11	12	14	16	17	19	21	23	25	27	29	31	N. 15
20	1	3	4	6	7	9	10	12	13	15	16	18	20	22	23	25	27	30	20
25	1	3	4	5	7	8	10	11	13	14	16	17	19	21	22	24	26	28	25
30	1	3	4	5	6	8	9	10	12	13	15	16	18	19	21	23	24	26	30
35	1	2	4	5	6	7	8	10	11	12	14	15	16	18	19	21	23	24	35
S. 40	1	2	3	4	6	7	8	9	10	11	13	14	15	16	18	19	21	22	N. 40
45	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	45
50	1	2	3	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	50
55	1	2	2	3	4	4	5	6	7	7	8	9	10	10	11	12	13	13	55
S. 60	1	1	2	2	3	4	4	5	5	6	6	7	7	8	8	9	9	10	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 52°, but it may be used for any place of departure between latitudes 50° and 54°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 50° and N. 54°, and the one on the right when the place of departure lies between S. 50° and S. 54°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude												Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
N. 60	2	4	6	8	10	13	15	17	19	21	23	26	28	30	33	35	37	40	S. 60
55	2	4	6	8	11	13	15	17	19	21	24	26	28	31	33	35	38	40	55
50	2	4	6	8	11	13	15	17	19	21	24	26	28	31	33	35	38	40	50
45	2	4	6	8	11	13	15	17	19	21	24	26	28	31	33	36	38	41	45
40	2	4	6	8	10	13	15	17	19	21	24	26	28	31	33	36	38	41	40
N. 35	2	4	6	8	10	13	15	17	19	21	23	26	28	31	33	35	38	41	S. 35
30	2	4	6	8	10	12	15	17	19	21	23	26	28	30	33	35	38	40	30
25	2	4	6	8	10	12	14	16	19	21	23	25	28	30	33	35	38	40	25
20	2	4	6	8	10	12	14	16	18	21	23	25	27	30	32	35	37	40	20
15	2	4	6	8	10	12	14	16	18	20	23	25	27	29	32	34	37	40	15
N. 10	2	4	6	8	10	12	14	16	18	20	22	24	27	29	31	34	36	39	S. 10
N. 5	2	4	6	8	10	12	13	16	18	20	22	24	26	28	31	33	36	38	S. 5
0	2	4	6	7	9	11	13	15	17	19	21	23	26	28	30	33	35	38	0
S. 5	2	4	5	7	9	11	13	15	17	19	21	23	25	27	30	32	34	37	N. 5
10	2	4	5	7	9	11	13	14	16	18	20	22	24	27	29	31	34	36	10
S. 15	2	3	5	7	9	10	12	14	16	18	20	22	24	26	28	30	33	35	N. 15
20	2	3	5	7	8	10	12	13	15	17	19	21	23	25	27	29	31	34	20
25	2	3	5	6	8	10	11	13	15	16	18	20	22	24	26	28	30	32	25
30	2	3	5	6	8	9	11	12	14	16	17	19	21	23	25	27	29	31	30
35	1	3	4	6	7	9	10	12	13	15	16	18	20	21	23	25	27	29	35
S. 40	1	3	4	5	7	8	9	11	12	14	15	17	18	20	22	23	25	27	N. 40
45	1	2	4	5	6	7	9	10	11	13	14	15	17	18	20	21	23	25	45
50	1	2	3	4	6	7	8	9	10	11	13	14	15	16	18	19	20	22	50
55	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	55
S. 60	1	2	2	3	4	5	6	7	7	8	9	10	11	12	12	13	14	15	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 57°, but it may be used for any place of departure between latitudes 55° and 59°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 55° and N. 59°, and the one on the right when the place of departure lies between S. 55° and S. 59°.

The direction in which the conversion angle must be applied is determined by the following rules:

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude												Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
N. 60	2	4	7	9	11	13	16	18	20	22	25	27	30	32	34	37	39	42	S. 60
55	2	4	7	9	11	13	16	18	20	23	25	27	30	32	35	37	40	42	55
50	2	4	7	9	11	14	16	18	20	23	25	28	30	33	35	38	40	43	50
45	2	4	7	9	11	14	16	18	21	23	25	28	30	33	35	38	40	43	45
40	2	4	7	9	11	14	16	18	21	23	25	28	30	33	35	38	41	43	40
N. 35	2	4	7	9	11	14	16	18	20	23	25	28	30	33	35	38	41	43	S. 35
30	2	4	7	9	11	13	16	18	20	23	25	28	30	33	35	38	41	43	30
25	2	4	7	9	11	13	16	18	20	23	25	27	30	32	35	38	40	43	25
20	2	4	7	9	11	13	15	18	20	22	25	27	30	32	35	38	40	43	20
15	2	4	6	9	11	13	15	18	20	22	25	27	29	32	35	37	40	43	15
N. 10	2	4	6	9	11	13	15	17	20	22	24	27	29	32	34	37	40	42	S. 10
N. 5	2	4	6	8	11	13	15	17	19	22	24	26	29	31	34	36	39	42	S. 5
0	2	4	6	8	10	13	15	17	19	21	24	26	28	31	33	36	39	41	0
S. 5	2	4	6	8	10	12	14	17	19	21	23	26	28	30	33	35	38	41	N. 5
10	2	4	6	8	10	12	14	16	18	21	23	25	27	30	32	35	37	40	10
S. 15	2	4	6	8	10	12	14	16	18	20	22	24	27	29	32	34	37	39	N. 15
20	2	4	6	8	9	11	13	15	17	19	22	24	26	28	31	33	36	38	20
25	2	4	5	7	9	11	13	15	17	19	21	23	25	27	30	32	35	37	25
30	2	4	5	7	9	11	12	14	16	18	20	22	24	26	29	31	33	36	30
35	2	3	5	7	8	10	12	14	16	17	19	21	23	25	27	30	32	34	35
S. 40	2	3	5	6	8	10	11	13	15	16	18	20	22	24	26	28	30	32	N. 40
45	2	3	4	6	8	9	11	12	14	15	17	19	21	22	24	26	28	30	45
50	1	3	4	6	7	8	10	11	13	14	16	17	19	21	22	24	26	28	50
55	1	2	4	5	6	8	9	10	11	13	14	16	17	18	20	21	23	24	55
S. 60	1	2	3	4	6	7	8	9	10	11	12	13	15	16	17	18	19	21	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 62°, but it may be used for any place of departure between latitudes 60° and 64°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 60° and N. 64°, and the one on the right when the place of departure lies between S. 60° and S. 64°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles ; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.

Latitude of Destination	Change of Longitude												Latitude of Destination
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
N. 60	2	5	7	9	12	14	17	19	21	24	26	29	31	34	36	39	41	44	S. 60
55	2	5	7	10	12	14	17	19	22	24	27	29	32	34	37	39	42	45	55
50	2	5	7	10	12	14	17	19	22	24	27	29	32	35	37	40	43	45	50
45	2	5	7	10	12	15	17	19	22	24	27	30	32	35	37	40	43	46	45
40	2	5	7	10	12	15	17	20	22	25	27	30	32	35	38	40	43	46	40
N. 35	2	5	7	10	12	15	17	20	22	25	27	30	32	35	38	41	43	46	S. 35
30	2	5	7	10	12	15	17	19	22	25	27	30	32	35	38	41	43	46	30
25	2	5	7	10	12	14	17	19	22	24	27	30	32	35	38	41	43	46	25
20	2	5	7	10	12	14	17	19	22	24	27	30	32	35	38	40	43	46	20
15	2	5	7	9	12	14	17	19	22	24	27	29	32	35	38	40	43	46	15
N. 10	2	5	7	9	12	14	17	19	22	24	27	29	32	35	37	40	43	46	S. 10
N. 5	2	5	7	9	12	14	16	19	21	24	26	29	32	34	37	40	43	46	S. 5
0	2	5	7	9	12	14	16	19	21	24	26	29	31	34	37	40	42	45	0
S. 5	2	5	7	9	11	14	16	18	21	23	26	28	31	34	36	39	42	45	N. 5
10	2	4	7	9	11	14	16	18	21	23	25	28	30	33	36	39	41	44	10
S. 15	2	4	7	9	11	13	16	18	20	23	25	27	30	33	35	38	41	44	N. 15
20	2	4	6	9	11	13	15	17	20	22	24	27	29	32	35	37	40	43	20
25	2	4	6	8	11	13	15	17	19	22	24	26	29	31	34	36	39	42	25
30	2	4	6	8	10	12	14	17	19	21	23	26	28	30	33	36	38	41	30
35	2	4	6	8	10	12	14	16	18	20	22	25	27	29	32	34	37	40	35
S. 40	2	4	6	8	9	11	13	15	17	19	22	24	26	28	31	33	36	38	N. 40
45	2	4	5	7	9	11	13	15	17	19	21	23	25	27	29	31	34	36	45
50	2	3	5	7	8	10	12	14	16	17	19	21	23	25	27	29	32	34	50
55	2	3	5	6	8	9	11	13	14	16	18	20	21	23	25	27	29	31	55
S. 60	1	3	4	6	7	9	10	11	13	14	16	18	19	21	22	24	26	28	N. 60

The table gives the angle necessary to convert a Great Circle bearing to a Rhumb Line bearing and the reverse in a *Latitude of Departure* of 67°, but it may be used for any place of departure between latitudes 65° and 69°. Of the two argument columns headed *Latitude of Destination*, the one on the left is to be used when the place of departure lies between N. 65° and N. 69°, and the one on the right when the place of departure lies between S. 65° and S. 69°.

The direction in which the conversion angle must be applied is determined by the following rules :

Latitude of Departure	Direction of bearing	To convert a Great Circle bearing to a Rhumb Line bearing
North	Westerly	Subtract
North	Easterly	Add
South	Westerly	Add
South	Easterly	Subtract

These rules refer to bearings measured from 000° T. in a clockwise direction. To convert Rhumb Line bearings to Great Circle bearings the conversion angle must be applied in the reverse sense.

The conversion angle at the place of destination may be taken as equal to that at the place of departure for distances up to 1,000 miles; for much greater distances, the corresponding table in the volume appropriate to the latitude of destination should be used, the places of destination and departure being interchanged.