

# Uitwerking opdracht

**Opdracht** Forsyth notatie

**Weeknummer** 6

**Studentnummer** S1096607

**Naam student** Mies van der Lippe

**Specialisatie** FICT

**Pogingnummer** 1

## Vraagstelling

Zie : <https://dodona.ugent.be/nl/exercises/1748605282/>

## Invoer

Geen

## Uitvoer

Verscheidende voorbeeld berekeningen

## Verbanden in en uitvoer

Geen, er worden slechts voorbeelden gegeven

## Beperkingen

Onbekend

## Voorbeelden

Verwachte invoer:

Geen
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Verwachte uitvoer:

<pre>{'ANB': (33.58, 85.85, 'Anniston', 'AL\n'), 'AUO': (32.67, 85.44, 'Auburn', 'AL\n'), 'BHM': (33.57, 86.75, 'Birmingham', 'AL\n'), 'CKL': (32.9, 87.25, 'Centreville', 'AL\n'), 'DHN': (31.32, 85.45, 'Dothan', 'AL\n'), 'OZR': (31.28, 85.72, 'Fort Rucker', 'AL\n'), 'GAD': (33.97, 86.09, 'Gadsden', 'AL\n'), 'HSV': (34.65, 86.77, 'Huntsville', 'AL\n'), 'MXF': (32.38, 86.37, 'Maxwell AFB', 'AL\n'), 'MOB': (30.68, 88.25, 'Mobile', 'AL\n'), 'BFM': (30.63, 88.07, 'Mobile Aeros', 'AL\n'), 'MGM': (32.3, 86.4, 'Montgomery', 'AL\n'), 'MSL': (34.75, 87.62, 'Muscle Shoal', 'AL\n'), 'SEM': (32.34, 86.99, 'Selma', 'AL\n'), 'TOI':</pre>
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(31.87, 86.02, 'Troy', 'AL\n'), 'TCL': (33.23, 87.62, 'Tuscaloosa', 'AL\n'), 'ADK': (51.88, 176.65, 'Adak', 'AK\n'), 'Z60': (67.1, 157.85, 'Ambler', 'AK\n'), 'ANC': (61.17, 150.02, 'Anchorage', 'AK\n'), 'MRI': (61.22, 149.85, 'Anchorage', 'AK\n'), 'AGN': (57.83, 134.97, 'Angoon', 'AK\n'), 'ANI': (61.58, 159.53, 'Aniak', 'AK\n'), 'ANN': (55.03, 131.57, 'Annette Isl', 'AK\n'), 'ATU': (53.5, 173.3, 'Attu', 'AK\n'), 'BRW': (71.3, 156.78, 'Barrow', 'AK\n'), 'BTI': (70.13, 143.63, 'Barter Islan', 'AK\n'), 'BET': (60.78, 161.8, 'Bethel Arpt', 'AK\n'), 'BTT': (66.92, 151.52, 'Bettles', 'AK\n'), 'BIG': (64.0, 145.73, 'Big Delta', 'AK\n'), '5BI': (60.82, 152.3, 'Big River Lk', 'AK\n'), 'Z68': (63.38, 148.95, 'Cantwell', 'AK\n'), 'CDE': (56.0, 134.22, 'Cape Decis', 'AK\n'), '5HN': (60.38, 147.08, 'Cape Hinch', 'AK\n'), 'CSP': (58.33, 137.05, 'Cape Spence', 'AK\n'), '5CE': (60.33, 145.0, 'Cape St Eli', 'AK\n'), 'WCR': (67.5, 148.48, 'Chandalar Lk', 'AK\n'), 'Z00': (62.88, 149.83, 'Chulitna', 'AK\n'), 'CRC': (65.83, 144.07, 'Circle City', 'AK\n'), 'CDB': (55.2, 162.72, 'Cold Bay', 'AK\n'), 'CDV': (60.5, 145.5, 'Cordova', 'AK\n'), 'CGA': (55.8, 133.25, 'Craig', 'AK\n'), 'SCC': (70.2, 148.47, 'Deadhorse', 'AK\n'), 'DLG': (59.05, 158.52, 'Dillingham', 'AK\n'), '5SZ': (62.73, 143.92, 'Duffys Tavern', 'AK\n'), 'DUT': (53.88, 166.53, 'Dutch Harbor', 'AK\n'), 'EAA': (64.77, 141.15, 'Eagle Arpt', 'AK\n'), 'ERO': (59.62, 135.37, 'Eldred Rock', 'AK\n'), 'ELV': (58.2, 136.35, 'Elfin Cove', 'AK\n'), 'FAI': (64.82, 147.87, 'Fairbanks', 'AK\n'), 'FWL': (62.85, 154.47, 'Farewell', 'AK\n'), 'FIV': (57.45, 134.03, 'Five Finger', 'AK\n'), 'FVM': (65.93, 149.83, 'Five Mile', 'AK\n'), 'FYU': (66.57, 145.27, 'Fort Yukon', 'AK\n'), 'FNR': (58.25, 134.9, 'Funter Bay', 'AK\n'), 'GBH': (68.48, 149.48, 'Galbraith Lk', 'AK\n'), 'GAM': (63.77, 171.73, 'Gambell', 'AK\n'), 'GKN': (62.15, 145.45, 'Gulkana Arpt', 'AK\n'), 'GST': (58.42, 135.73, 'Gustavus', 'AK\n'), 'Z26': (59.23, 135.43, 'Haines Hrbor', 'AK\n'), '5HR': (61.98, 152.08, 'Hayes River', 'AK\n'), '5EA': (63.83, 149.0, 'Healy River', 'AK\n'), 'HOM': (59.63, 151.5, 'Homer', 'AK\n'), 'Z49': (58.1, 135.45, 'Hoonah Seapl', 'AK\n'), 'ILI': (59.75, 154.92, 'Iliamna Arpt', 'AK\n'), 'JNU': (58.37, 134.58, 'Juneau', 'AK\n'), 'KAE': (56.97, 133.95, 'Kake Seaplan', 'AK\n'), 'ENA': (60.57, 151.25, 'Kenai', 'AK\n'), 'KTN': (55.35, 131.7, 'Ketchikan', 'AK\n'), 'AKN': (58.68, 156.65, 'King Salmon', 'AK\n'), 'ADQ': (57.75, 152.5, 'Kodiak', 'AK\n'), 'OTZ': (66.87, 162.63, 'Kotzebue', 'AK\n'), '5W0': (61.63, 149.03, 'Lazy Mtn', 'AK\n'), 'LNI': (70.92, 153.23, 'Lonely (dew)', 'AK\n'), 'MLY': (65.0, 150.65, 'Manley Ht Sp', 'AK\n'), 'MXY': (61.43, 142.92, 'McCarthy', 'AK\n'), 'MCG': (62.97, 155.62, 'Mcgrath', 'AK\n'), 'MYU': (60.37, 166.27, 'Mekoryuk', 'AK\n'), 'MDO': (59.43, 146.33, 'Middleton Is', 'AK\n'), 'MHM': (63.9, 152.27, 'Minchumina', 'AK\n'), 'ENN': (64.55, 149.08, 'Nenana', 'AK\n'), 'KSM': (62.07, 163.3, 'New Andreadfs', 'AK\n'), 'IKO': (53.58, 169.42, 'Nikolski', 'AK\n'), 'OME': (64.5, 165.43, 'Nome', 'AK\n'), 'ORT': (62.97, 141.93, 'Northway', 'AK\n'), 'OLI': (70.5, 149.88, 'Oliktok Dew', 'AK\n'), 'PAQ': (61.6, 149.08, 'Palmer', 'AK\n'), '5PX': (63.03, 145.5, 'Paxson', 'AK\n'), 'PSG': (56.82, 132.97, 'Petersburg', 'AK\n'), 'PIZ': (69.82, 162.92, 'Point Lay', 'AK\n'), 'Z76': (56.25, 134.65, 'Port Alexndr', 'AK\n'), 'KPC': (65.25, 166.87, 'Port Clarnce', 'AK\n'), 'PTH': (56.95, 158.62, 'Port Heiden', 'AK\n'), 'PPC': (66.82, 150.65, 'Prospect Crk', 'AK\n'), 'PUO': (70.25, 148.33, 'Prudhoe Bay', 'AK\n'), 'Z30': (60.2, 154.3, 'Pt Alsworth', 'AK\n'), 'PTI': (62.17, 153.25, 'Puntilla', 'AK\n'), 'SDP': (55.33, 160.5, 'Sand Point', 'AK\n'), '5WD': (60.18, 149.75, 'Seward', 'AK\n'), 'SYA': (53.2, 174.13, 'Shemy', 'AK\n'), 'SHH': (66.27, 166.03, 'Shishmaref', 'AK\n'), 'SIT': (57.07, 135.35, 'Sitka', 'AK\n'), 'SKJ': (56.88, 154.2, 'Sitkinak', 'AK\n'), 'SGY': (59.75, 135.53, 'Skagway', 'AK\n'), 'SKW': (61.97, 151.2, 'Skwentna',

'AK\n'), '5S0': (62.03, 146.67, 'Snowshoe Lk', 'AK\n'), 'SNP': (57.15, 170.22, 'St Paul Is', 'AK\n'), '5GN': (61.9, 147.3, 'Tahnetta Pass', 'AK\n'), 'TKA': (62.3, 150.1, 'Talkeetna', 'AK\n'), 'TAL': (65.17, 152.1, 'Tanana', 'AK\n'), 'UMT': (69.37, 152.13, 'Umiat', 'AK\n'), 'UNK': (63.88, 160.8, 'Unalakleet', 'AK\n'), 'VVS': (61.13, 146.35, 'Valdez', 'AK\n'), 'VDZ': (61.13, 146.25, 'Valdez 2', 'AK\n'), 'AIN': (70.62, 159.85, 'Wainwright', 'AK\n'), 'WAA': (66.03, 168.08, 'Wales', 'AK\n'), '5WT': (60.78, 148.72, 'Whittier', 'AK\n'), 'Z22': (61.75, 150.05, 'Willow Arpt', 'AK\n'), 'WRG': (56.48, 132.37, 'Wrangell', 'AK\n'), 'YAK': (59.52, 139.67, 'Yakutat', 'AK\n'), 'DMA': (32.17, 110.88, 'Davis-M AFB', 'AZ\n'), 'DVT': (33.68, 112.08, 'Deer Valley', 'AZ\n'), 'DUG': (31.45, 109.6, 'Douglas', 'AZ\n'), 'FFZ': (33.47, 111.73, 'Falcon Fld', 'AZ\n'), 'FLG': (35.13, 111.67, 'Flagstaff', 'AZ\n'), 'FHU': (31.6, 110.35, 'Fort Huachuc', 'AZ\n'), 'GBN': (33.55, 113.17, 'Gila Bend', 'AZ\n'), 'GYR': (33.42, 112.38, 'Goodyear', 'AZ\n'), 'GCN': (35.95, 112.15, 'Grand Canyon', 'AZ\n'), 'IGM': (35.27, 113.95, 'Kingman', 'AZ\n'), 'LUF': (33.53, 112.38, 'Luke', 'AZ\n'), 'PGA': (36.93, 111.45, 'Page', 'AZ\n'), '0E4': (34.23, 111.33, 'Payson', 'AZ\n'), 'PHX': (33.43, 112.02, 'Phoenix', 'AZ\n'), 'PRC': (34.65, 112.43, 'Prescott', 'AZ\n'), 'E74': (32.82, 109.68, 'Safford Awrs', 'AZ\n'), 'SDL': (33.62, 111.92, 'Scottsdale', 'AZ\n'), 'E03': (34.27, 110.0, 'Show Low', 'AZ\n'), 'SOW': (34.27, 110.0, 'Show Low', 'AZ\n'), 'TUS': (32.12, 110.93, 'Tucson', 'AZ\n'), 'CHD': (33.3, 111.67, 'Williams AFB', 'AZ\n'), 'INW': (35.02, 110.73, 'Winslow', 'AZ\n'), 'YUM': (33.1, 115.0, 'Yuma', 'AZ\n'), 'NYL': (32.65, 114.62, 'Yuma Mcas', 'AZ\n'), '1Y7': (32.85, 114.4, 'Yuma Prv Gd', 'AZ\n'), 'BYH': (35.97, 89.95, 'Blytheville', 'AR\n'), 'CDH': (33.52, 92.4, 'Camden', 'AR\n'), 'ELD': (33.22, 92.8, 'El Dorado', 'AR\n'), 'FYV': (36.0, 94.17, 'Fayetteville', 'AR\n'), 'FSM': (35.33, 94.37, 'Ft Smith', 'AR\n'), 'HRO': (36.27, 93.15, 'Harrison', 'AR\n'), 'HOT': (34.48, 93.1, 'Hot Springs', 'AR\n'), 'JBR': (35.83, 90.65, 'Jonesboro', 'AR\n'), 'LIT': (35.22, 92.38, 'Little Rock', 'AR\n'), 'LRF': (34.92, 92.15, 'Little Rock', 'AR\n'), 'LZK': (34.83, 92.25, 'Little Rock', 'AR\n'), 'PBF': (34.17, 91.93, 'Pine Bluff', 'AR\n'), 'ASG': (36.18, 94.13, 'Springdale', 'AR\n'), 'TXK': (33.45, 94.0, 'Texarkana', 'AR\n'), 'ARG': (36.13, 90.93, 'Walnut Ridge', 'AR\n'), 'NGZ': (37.78, 122.32, 'Alameda NAS', 'CA\n'), 'S11': (41.48, 120.53, 'Alturas', 'CA\n'), 'ACV': (40.98, 124.1, 'Arcata', 'CA\n'), 'BFL': (35.43, 119.05, 'Bakersfield', 'CA\n'), 'BAB': (39.13, 121.45, 'Beale AFB', 'CA\n'), 'BUO': (33.93, 116.95, 'Beaumont', 'CA\n'), 'BYS': (35.28, 116.62, 'Bicycle Lk', 'CA\n'), 'L35': (34.27, 116.68, 'Big Bear Apt', 'CA\n'), 'BIH': (37.6, 118.6, 'Bishop', 'CA\n'), 'BLU': (39.28, 120.7, 'Blue Canyon', 'CA\n'), 'BLH': (33.62, 114.72, 'Blythe', 'CA\n'), 'BUR': (34.2, 118.37, 'Burbank', 'CA\n'), 'NFG': (33.3, 117.35, 'Camp Pendlet', 'CA\n'), 'CZZ': (32.62, 116.47, 'Campo', 'CA\n'), 'CRQ': (33.13, 117.28, 'Carlsbad', 'CA\n'), 'MER': (37.38, 120.57, 'Castle AFB', 'CA\n'), 'CIC': (39.78, 121.85, 'Chico', 'CA\n'), 'NID': (35.68, 117.68, 'China Lake', 'CA\n'), 'CNO': (33.97, 117.63, 'Chino', 'CA\n'), 'CCR': (37.98, 122.05, 'Concord', 'CA\n'), 'CEC': (41.78, 124.23, 'Crescent Cty', 'CA\n'), 'DAG': (34.87, 116.78, 'Daggett', 'CA\n'), 'EDW': (34.9, 117.88, 'Edwards AFB', 'CA\n'), 'NJK': (32.82, 115.68, 'El Centro', 'CA\n'), 'EMT': (34.08, 118.03, 'El Monte', 'CA\n'), 'NZJ': (33.67, 117.73, 'El Toro', 'CA\n'), 'EKA': (41.33, 124.28, 'Eureka', 'CA\n'), 'HGT': (36.0, 121.32, 'Fort Hunter', 'CA\n'), 'OAR': (36.68, 121.77, 'Fort Ord', 'CA\n'), 'FAT': (36.77, 119.72, 'Fresno', 'CA\n'), 'FUL': (33.87, 117.97, 'Fullerton', 'CA\n'), 'VCV': (34.58, 117.38, 'George AFB', 'CA\n'), 'HHR': (33.92, 118.33, 'Hawthorne', 'CA\n'), 'HWD': (37.65, 122.12, 'Hayward', 'CA\n'), 'IPL': (32.83, 115.57, 'Imperial',

'CA\n'), 'NRS': (32.57, 117.12, 'Imperial Bch', 'CA\n'), 'POC': (34.1, 117.78, 'La Verne', 'CA\n'), 'TVL': (38.9, 120.0, 'Lake Tahoe', 'CA\n'), 'WJF': (34.73, 118.22, 'Lancaster', 'CA\n'), 'NLC': (36.33, 119.95, 'Lemoore NAS', 'CA\n'), 'LVK': (37.7, 121.82, 'Livermore', 'CA\n'), 'LGB': (33.82, 118.15, 'Long Beach', 'CA\n'), 'SLI': (33.78, 118.05, 'Los Alamitos', 'CA\n'), 'LAX': (33.93, 118.4, 'Los Angeles', 'CA\n'), 'MMH': (37.63, 118.92, 'Mammoth Lks', 'CA\n'), 'RIV': (33.88, 117.27, 'March AFB', 'CA\n'), 'MYV': (39.1, 121.57, 'Marysville', 'CA\n'), 'MHR': (38.57, 121.3, 'Mather AFB', 'CA\n'), 'MCC': (38.67, 121.4, 'McClellan', 'CA\n'), 'MCE': (37.28, 120.52, 'Merced', 'CA\n'), 'NKX': (32.87, 117.15, 'Miramar NAS', 'CA\n'), 'MOD': (37.63, 120.95, 'Modesto', 'CA\n'), 'NUQ': (37.42, 122.05, 'Moffet NAS', 'CA\n'), 'MHV': (35.05, 118.15, 'Mojave', 'CA\n'), '105': (41.73, 122.53, 'Montague', 'CA\n'), 'MRY': (36.58, 121.85, 'Monterey', 'CA\n'), 'MHS': (41.32, 122.32, 'Mount Shasta', 'CA\n'), 'MWS': (34.23, 118.07, 'Mount Wilson', 'CA\n'), 'APC': (38.22, 122.28, 'Napa', 'CA\n'), 'EED': (34.77, 114.62, 'Needles', 'CA\n'), 'NZY': (32.7, 117.2, 'North Is', 'CA\n'), 'SBD': (34.1, 117.23, 'Norton AFB', 'CA\n'), 'OAK': (37.73, 122.22, 'Oakland', 'CA\n'), 'ONT': (34.05, 117.62, 'Ontario Intl', 'CA\n'), 'OXR': (34.2, 119.2, 'Oxnard', 'CA\n'), 'PSP': (33.83, 116.5, 'Palm Springs', 'CA\n'), 'PMD': (35.05, 118.13, 'Palmdale', 'CA\n'), 'PAO': (37.47, 122.12, 'Palo Alto', 'CA\n'), 'PRB': (35.67, 120.63, 'Paso Robles', 'CA\n'), '53Q': (37.83, 122.83, 'Pillaro Pt', 'CA\n'), 'NTD': (34.12, 119.12, 'Point Mugu', 'CA\n'), 'PAA': (39.58, 124.22, 'Pt Arena', 'CA\n'), 'PGU': (34.95, 121.12, 'Pt Arguello', 'CA\n'), '87Q': (35.67, 121.28, 'Pt Piedras', 'CA\n'), 'PPD': (36.12, 121.47, 'Pt Piedras', 'CA\n'), 'RBL': (40.15, 122.25, 'Red Bluff', 'CA\n'), 'RDD': (40.5, 122.3, 'Redding', 'CA\n'), 'RAL': (33.95, 117.45, 'Riverside', 'CA\n'), 'SAC': (38.52, 121.5, 'Sacramento', 'CA\n'), 'SMF': (38.7, 121.6, 'Sacramento', 'CA\n'), 'SNS': (36.67, 121.6, 'Salinas', 'CA\n'), 'SQL': (37.52, 122.25, 'San Carlos', 'CA\n'), 'L10': (33.42, 117.62, 'San Clemente', 'CA\n'), 'NUC': (33.02, 118.58, 'San Clemente', 'CA\n'), 'MYF': (32.82, 117.13, 'San Diego', 'CA\n'), 'SAN': (32.73, 117.17, 'San Diego', 'CA\n'), 'SDM': (32.57, 116.98, 'San Diego', 'CA\n'), 'SEE': (32.82, 116.97, 'San Diego', 'CA\n'), '51Q': (37.75, 122.68, 'San Francisco', 'CA\n'), 'SFO': (37.62, 122.38, 'San Francisco', 'CA\n'), 'SJC': (37.37, 121.92, 'San Jose', 'CA\n'), 'RHV': (37.33, 121.82, 'San Jose/Rei', 'CA\n'), 'SBP': (35.23, 120.65, 'San Luis Obi', 'CA\n'), 'L98': (33.38, 117.58, 'San Mateo', 'CA\n'), 'N5G': (34.03, 120.4, 'San Miguel', 'CA\n'), 'NSI': (33.25, 119.45, 'San Nic Isl', 'CA\n'), 'SDB': (34.75, 118.73, 'Sandburg', 'CA\n'), 'SNA': (33.67, 117.88, 'Santa Ana', 'CA\n'), 'SBA': (34.43, 119.83, 'Santa Barb', 'CA\n'), 'SMX': (34.9, 120.45, 'Santa Maria', 'CA\n'), 'SMO': (34.02, 118.45, 'Santa Monica', 'CA\n'), 'STS': (38.52, 122.82, 'Santa Rosa', 'CA\n'), 'O87': (40.03, 124.07, 'Shelter Cove', 'CA\n'), 'SIY': (41.78, 122.47, 'Siskiyou', 'CA\n'), 'SCK': (37.9, 121.25, 'Stockton', 'CA\n'), '4SU': (35.33, 117.1, 'Superior Val', 'CA\n'), 'SVE': (40.63, 120.95, 'Susanville', 'CA\n'), 'TRM': (33.63, 116.17, 'Thermal', 'CA\n'), 'TOA': (33.8, 118.33, 'Torrance', 'CA\n'), 'SUU': (38.27, 121.93, 'Travis AFB', 'CA\n'), 'TRK': (39.32, 120.13, 'Truckee-Tahoe', 'CA\n'), 'NTK': (33.7, 117.83, 'Tustin Mcas', 'CA\n'), 'NXP': (34.28, 116.15, 'Twenty9 Palm', 'CA\n'), 'UKI': (39.13, 123.2, 'Ukiah', 'CA\n'), 'VNY': (34.22, 118.48, 'Van Nuys', 'CA\n'), 'VBG': (35.2, 120.95, 'Vandenberg', 'CA\n'), 'VIS': (36.32, 119.4, 'Visalia', 'CA\n'), 'AFF': (39.52, 105.35, 'Air Force A', 'CO\n'), 'AKO': (40.17, 103.22, 'Akron', 'CO\n'), 'ALS': (37.45, 105.87, 'Alamosa', 'CO\n'), 'ASE': (39.22, 106.87, 'Aspen', 'CO\n'), 'BJC': (39.9, 105.12, 'Brimfield/Jef', 'CO\n'), 'BKF': (39.72, 104.75,

'Buckley', 'CO\n'), 'COS': (38.82, 104.72, 'Colo Sprgs', 'CO\n'), 'CEZ': (37.3, 108.63, 'Cortez', 'CO\n'), 'CAG': (40.5, 107.53, 'Craig-Moffat', 'CO\n'), 'DEN': (39.75, 104.87, 'Denver', 'CO\n'), 'DRO': (37.15, 107.75, 'Durango', 'CO\n'), 'EGE': (39.65, 106.92, 'Eagle', 'CO\n'), 'APA': (39.57, 104.83, 'Englewood', 'CO\n'), 'FCS': (38.68, 104.77, 'Fort Carson', 'CO\n'), 'FSR': (39.57, 105.5, 'Fraser', 'CO\n'), 'FNL': (40.45, 105.02, 'Ft Col/Lovel', 'CO\n'), 'FCL': (40.58, 105.08, 'Ft Collins', 'CO\n'), 'GJT': (39.12, 108.53, 'Grand Jct', 'CO\n'), 'GXY': (40.43, 104.63, 'Greeley-Wld', 'CO\n'), '2V9': (38.55, 106.93, 'Gunnison', 'CO\n'), 'GUC': (38.55, 106.92, 'Gunnison', 'CO\n'), 'LHX': (38.05, 103.52, 'La Junta', 'CO\n'), '4LJ': (38.12, 102.6, 'Lamar', 'CO\n'), 'LXV': (39.25, 106.3, 'Leadville', 'CO\n'), 'LIC': (39.18, 103.7, 'Limon', 'CO\n'), '6V8': (38.5, 107.88, 'Montrose', 'CO\n'), 'MTJ': (38.5, 107.88, 'Montrose', 'CO\n'), 'PUB': (38.28, 104.52, 'Pueblo', 'CO\n'), '1V1': (39.53, 107.8, 'Rifle', 'CO\n'), 'S29': (38.53, 106.05, 'Salida', 'CO\n'), 'SBS': (40.48, 106.82, 'Steamboat Sp', 'CO\n'), 'TAD': (37.25, 104.33, 'Trinidad', 'CO\n'), 'C96': (40.0, 105.87, 'Winter Park', 'CO\n'), 'BDR': (41.17, 73.13, 'Bridgeport', 'CT\n'), 'DXR': (41.37, 73.48, 'Danbury', 'CT\n'), 'GON': (41.33, 72.05, 'Groton', 'CT\n'), 'HFD': (41.73, 72.65, 'Hartford', 'CT\n'), '30N': (41.22, 72.67, 'New Haven', 'CT\n'), 'HVN': (41.27, 72.88, 'New Haven', 'CT\n'), 'N11': (41.27, 72.9, 'New Haven', 'CT\n'), '18N': (41.3, 72.08, 'New London', 'CT\n'), 'BDL': (41.93, 72.68, 'Windsor Loc', 'CT\n'), 'DOV': (39.13, 75.47, 'Dover', 'DE\n'), 'ILG': (39.67, 75.6, 'Wilmington', 'DE\n'), 'IAD': (38.95, 77.46, 'Washington/Dulles', 'DC\n'), 'DCA': (38.85, 77.04, 'Washington/Natl', 'DC\n'), 'AQQ': (29.73, 85.03, 'Apalachicola', 'FL\n'), '90J': (29.12, 81.57, 'Astor NAS', 'FL\n'), 'AGR': (28.08, 81.55, 'Avon Park G', 'FL\n'), 'XMR': (28.47, 80.55, 'Cape Canaveral', 'FL\n'), 'NZC': (30.22, 81.88, 'Cecil', 'FL\n'), 'CEW': (30.78, 86.52, 'Crestview', 'FL\n'), 'CTY': (29.62, 83.1, 'Cross City', 'FL\n'), 'DAB': (29.18, 81.05, 'Daytona Bch', 'FL\n'), 'EGI': (30.65, 86.52, 'Duke Fld', 'FL\n'), 'VPS': (30.48, 86.53, 'Eglin AFB', 'FL\n'), 'X91': (27.6, 82.77, 'Egmont Key', 'FL\n'), 'FXE': (26.13, 80.13, 'Fort Lauderd', 'FL\n'), 'FMY': (26.58, 81.87, 'Fort Myers', 'FL\n'), 'FLL': (26.07, 80.15, 'Ft Lauderdale', 'FL\n'), 'RSW': (26.65, 81.87, 'Ft Myers', 'FL\n'), 'GNV': (29.68, 82.27, 'Gainesville', 'FL\n'), 'HST': (25.48, 80.38, 'Homestead', 'FL\n'), 'HRT': (30.43, 86.68, 'Hurlburt Fld', 'FL\n'), 'CRG': (30.33, 81.52, 'Jacksonville', 'FL\n'), 'JAX': (30.5, 81.7, 'Jacksonville', 'FL\n'), 'NIP': (30.23, 81.68, 'Jacksonville', 'FL\n'), 'EYW': (24.55, 81.75, 'Key West', 'FL\n'), 'NQX': (24.57, 81.68, 'Key West NAS', 'FL\n'), 'LAL': (28.03, 81.95, 'Lakeland', 'FL\n'), 'MCF': (27.85, 82.52, 'Macdill AFB', 'FL\n'), 'MAI': (30.84, 85.18, 'Marianna', 'FL\n'), 'NRB': (30.4, 81.42, 'Mayport NAS', 'FL\n'), 'MLB': (28.1, 80.63, 'Melbourne', 'FL\n'), 'MIA': (25.82, 80.28, 'Miami Intl', 'FL\n'), 'OPF': (25.92, 80.28, 'Miami/Opa', 'FL\n'), 'TMB': (25.65, 80.43, 'Miami/Tamiami', 'FL\n'), 'APF': (26.13, 81.8, 'Naples', 'FL\n'), 'X68': (28.62, 80.68, 'Nasa Shuttle', 'FL\n'), 'MCO': (28.43, 81.32, 'Orlando', 'FL\n'), 'ORL': (28.55, 81.33, 'Orlando', 'FL\n'), 'PFN': (30.2, 85.68, 'Panama City', 'FL\n'), 'COF': (28.23, 80.6, 'Patrick AFB', 'FL\n'), 'NPA': (30.35, 87.32, 'Pensacola', 'FL\n'), 'PNS': (30.47, 87.2, 'Pensacola', 'FL\n'), 'TBW': (27.97, 82.6, 'Ruskin', 'FL\n'), 'PIE': (27.92, 82.68, 'Saint Peters', 'FL\n'), 'SFB': (28.78, 81.25, 'Sanford', 'FL\n'), 'SRQ': (27.4, 82.55, 'Sarasota', 'FL\n'), 'TLH': (30.38, 84.37, 'Tallahassee', 'FL\n'), 'TPA': (27.97, 82.53, 'Tampa Intl', 'FL\n'), 'TIX': (28.52, 80.8, 'Titusville', 'FL\n'), 'PAM': (30.07, 85.58, 'Tyndall AFB', 'FL\n'), 'VRB': (27.65, 80.42, 'Vero Beach', 'FL\n'), 'PBI': (26.68, 80.12, 'W

Palm Beach', 'FL\n'), 'NSE': (30.72, 87.02, 'Whiting Fld', 'FL\n'), 'ABY': (31.53, 84.18, 'Albany', 'GA\n'), 'AMG': (31.53, 82.52, 'Alma', 'GA\n'), 'AHN': (33.95, 83.32, 'Athens', 'GA\n'), 'ATL': (33.65, 84.42, 'Atlanta', 'GA\n'), 'PDK': (33.88, 84.3, 'Atlanta/Dkbl', 'GA\n'), 'FTY': (33.78, 84.52, 'Atlanta/Fltn', 'GA\n'), 'AGS': (33.37, 81.97, 'Augusta/Bush', 'GA\n'), 'SSI': (31.15, 81.38, 'Brunswick', 'GA\n'), 'CSG': (32.52, 84.93, 'Columbus', 'GA\n'), 'MGE': (33.92, 84.52, 'Dobbins AFB', 'GA\n'), 'MGF': (34.53, 84.87, 'Dobbins AFB', 'GA\n'), 'LSF': (32.33, 85.0, 'Fort Benning', 'GA\n'), 'LHW': (31.88, 81.57, 'Ft Stewart', 'GA\n'), 'SVN': (32.02, 81.15, 'Hunter Aaf', 'GA\n'), 'LGC': (33.01, 85.07, 'La Grange', 'GA\n'), 'MCN': (32.7, 83.65, 'Macon/Lewis', 'GA\n'), 'VAD': (30.97, 83.2, 'Moody AFB', 'GA\n'), 'WRB': (32.63, 83.6, 'Robins AFB', 'GA\n'), 'RMG': (34.35, 85.17, 'Rome/Russell', 'GA\n'), 'SAV': (32.13, 81.2, 'Savannah Mun', 'GA\n'), 'VLD': (30.78, 83.28, 'Valdosta', 'GA\n'), 'AYS': (31.25, 82.4, 'Waycross', 'GA\n'), 'HNA': (21.53, 158.12, 'Barbers Pt', 'HI\n'), 'BKH': (22.05, 160.3, 'Barking San', 'HI\n'), '126': (24.45, 166.47, 'Fr Frigate', 'HI\n'), 'ITO': (19.72, 155.07, 'Hilo', 'HI\n'), 'HNL': (21.35, 157.93, 'Honolulu Int', 'HI\n'), 'OGG': (20.9, 156.43, 'Kahului Maui', 'HI\n'), 'HNG': (21.75, 158.28, 'Kaneohe Mca', 'HI\n'), 'KOA': (19.75, 156.05, 'Ke-Ahole/Kon', 'HI\n'), '025': (22.38, 159.67, 'Kilauea Pt', 'HI\n'), 'LNY': (20.8, 156.95, 'Lanai-Lanai', 'HI\n'), 'LIH': (21.98, 159.35, 'Lihue-Kauai', 'HI\n'), 'JHM': (20.97, 156.83, 'Maui', 'HI\n'), 'MKK': (21.15, 157.1, 'Molokai', 'HI\n'), '122': (20.42, 156.47, 'Upolo Pt Ln', 'HI\n'), 'MUE': (20.0, 156.12, 'Waimea-Koha', 'HI\n'), 'BOI': (43.57, 116.22, 'Boise', 'ID\n'), 'BYI': (42.53, 113.77, 'Burley', 'ID\n'), 'U15': (44.52, 114.22, 'Challis', 'ID\n'), 'COE': (47.77, 116.82, 'Coeur d'Alene', 'ID\n'), 'P69': (45.82, 115.43, 'Elk City', 'ID\n'), 'GNG': (43.0, 115.17, 'Gooding', 'ID\n'), 'S80': (45.92, 116.13, 'Grangeville', 'ID\n'), 'IDA': (43.52, 112.07, 'Idaho Falls', 'ID\n'), 'LWS': (46.38, 117.02, 'Lewiston', 'ID\n'), 'MLD': (42.17, 112.32, 'Malad City', 'ID\n'), '77M': (42.3, 113.37, 'Malta', 'ID\n'), 'MYL': (44.88, 116.1, 'Mccall', 'ID\n'), 'MUO': (43.05, 115.87, 'Mountn Home', 'ID\n'), 'S06': (47.47, 115.8, 'Mullan', 'ID\n'), 'PIH': (42.92, 112.6, 'Pocatello', 'ID\n'), '27U': (45.18, 113.9, 'Salmon', 'ID\n'), 'SMN': (45.17, 114.47, 'Salmon', 'ID\n'), 'U78': (42.65, 111.58, 'Soda Springs', 'ID\n'), 'SUN': (43.5, 114.3, 'Sun Valley', 'ID\n'), 'TWF': (42.48, 114.48, 'Twin Falls', 'ID\n'), 'ALN': (38.88, 90.05, 'Alton', 'IL\n'), 'ARR': (41.77, 88.32, 'Aurora', 'IL\n'), 'CPS': (38.57, 90.15, 'Bistate Park', 'IL\n'), 'BMI': (40.48, 88.93, 'Bloomington', 'IL\n'), 'BDF': (41.16, 89.6, 'Bradford', 'IL\n'), 'CTR': (37.07, 89.22, 'Cairo', 'IL\n'), 'MDH': (37.78, 89.25, 'Carbondale', 'IL\n'), 'ENL': (38.51, 89.09, 'Centralia', 'IL\n'), 'CMI': (40.03, 88.28, 'Champaign/Urbana', 'IL\n'), 'CHI': (41.9, 87.65, 'Chicago', 'IL\n'), 'CGX': (41.87, 87.62, 'Chicago/Meigs', 'IL\n'), 'MDW': (41.78, 87.75, 'Chicago/Midway', 'IL\n'), 'ORD': (41.98, 87.9, 'Chicago/O'hare', 'IL\n'), 'DNV': (40.2, 87.6, 'Danville', 'IL\n'), 'DKB': (41.93, 88.72, 'DeKalb', 'IL\n'), 'DEC': (39.83, 88.87, 'Decatur', 'IL\n'), 'DPA': (41.92, 88.25, 'Du Page', 'IL\n'), 'GBG': (40.93, 90.43, 'Galesburg', 'IL\n'), 'NBU': (42.08, 87.82, 'Glenview NAS', 'IL\n'), 'IKK': (41.07, 87.85, 'Kankakee', 'IL\n'), 'MQB': (40.52, 90.66, 'Macomb', 'IL\n'), 'MWA': (37.75, 89.0, 'Marion', 'IL\n'), 'MMO': (41.37, 88.68, 'Marseilles', 'IL\n'), 'MTO': (39.48, 88.28, 'Mattoon', 'IL\n'), 'MLI': (41.45, 90.52, 'Moline/Quad', 'IL\n'), 'MVN': (38.32, 88.86, 'Mount Vernon', 'IL\n'), 'PIA': (40.67, 89.68, 'Peoria', 'IL\n'), 'UIN': (39.93, 91.2, 'Quincy', 'IL\n'), 'RFD': (42.2, 89.1, 'Rockford', 'IL\n'), 'SLO': (38.63, 88.96, 'Salem', 'IL\n'), 'BLV': (38.55,



89.85, 'Scott AFB', 'IL\n'), 'SPI': (39.85, 89.67, 'Springfield', 'IL\n'), 'SQI': (41.74, 89.67, 'Sterling', 'IL\n'), 'TAZ': (39.53, 89.33, 'Taylorville', 'IL\n'), 'VLA': (38.99, 89.17, 'Vandalia', 'IL\n'), 'BAK': (39.38, 86.5, 'Bakalar Af', 'IN\n'), 'BMG': (39.13, 86.62, 'Bloomington', 'IN\n'), 'EKM': (41.72, 86.0, 'Elkhart', 'IN\n'), 'EVV': (38.05, 87.53, 'Evansville', 'IN\n'), 'FWA': (41.0, 85.2, 'Fort Wayne', 'IN\n'), 'GYG': (41.62, 87.42, 'Gary', 'IN\n'), 'GUS': (40.65, 86.15, 'Grissom AFB', 'IN\n'), 'IND': (39.73, 86.27, 'Indianapolis', 'IN\n'), 'MIE': (40.23, 85.38, 'Muncie', 'IN\n'), 'SBN': (41.7, 86.32, 'South Bend', 'IN\n'), 'HUF': (39.45, 87.3, 'Terre Haute', 'IN\n'), 'LAF': (40.42, 86.93, 'W Lafayette', 'IN\n'), 'BRL': (40.78, 91.12, 'Burlington', 'IA\n'), 'CID': (41.88, 91.7, 'Cedar Rapids', 'IA\n'), 'DSM': (41.53, 93.65, 'Des Moines', 'IA\n'), 'DBQ': (42.4, 90.7, 'Dubuque', 'IA\n'), 'EST': (43.4, 94.75, 'Estherville', 'IA\n'), 'FOD': (42.55, 94.18, 'Fort Dodge', 'IA\n'), '30I': (40.62, 93.93, 'Lamoni', 'IA\n'), 'MCW': (43.15, 93.33, 'Mason City', 'IA\n'), 'OTM': (41.1, 92.45, 'Ottumwa', 'IA\n'), 'SUX': (42.4, 96.38, 'Sioux City', 'IA\n'), '3SE': (43.17, 95.15, 'Spencer', 'IA\n'), 'ALO': (42.55, 92.4, 'Waterloo Mun', 'IA\n'), 'CNU': (37.67, 95.48, 'Chanute', 'KS\n'), '3KM': (37.75, 97.22, 'Col. J Jabar', 'KS\n'), 'CNK': (39.55, 97.65, 'Concordia', 'KS\n'), 'DDC': (37.77, 99.97, 'Dodge City', 'KS\n'), '1K5': (37.0, 101.88, 'Elkhart', 'KS\n'), 'EMP': (38.33, 96.2, 'Emporia', 'KS\n'), 'FLV': (39.37, 94.92, 'Ft Leavnwrth', 'KS\n'), 'FRI': (39.05, 96.77, 'Ft Riley', 'KS\n'), 'GCK': (37.93, 100.72, 'Garden City', 'KS\n'), 'GLD': (39.37, 101.7, 'Goodland', 'KS\n'), 'HYS': (38.85, 99.27, 'Hays', 'KS\n'), 'HLC': (39.38, 99.83, 'Hill City', 'KS\n'), 'HUT': (38.07, 97.87, 'Hutchinson', 'KS\n'), 'IXD': (38.82, 94.88, 'Johnson Cnty', 'KS\n'), 'LBL': (37.05, 100.97, 'Liberal', 'KS\n'), 'MHK': (39.15, 96.67, 'Manhattan', 'KS\n'), 'IAB': (37.62, 97.27, 'Mcconnell Af', 'KS\n'), 'P28': (37.3, 98.58, 'Medicine Ldg', 'KS\n'), 'OJC': (38.85, 94.9, 'Olathe', 'KS\n'), 'RSL': (38.87, 98.82, 'Russell', 'KS\n'), 'SLN': (38.8, 97.65, 'Salina', 'KS\n'), 'TOP': (39.07, 95.62, 'Topeka', 'KS\n'), 'FOE': (38.95, 95.67, 'Topeka/Forbe', 'KS\n'), 'ICT': (37.65, 97.43, 'Wichita', 'KS\n'), 'BWG': (36.97, 86.43, 'Bowling Gren', 'KY\n'), 'HOP': (36.67, 87.5, 'Ft Campbell', 'KY\n'), 'FTK': (37.9, 85.97, 'Ft Knox', 'KY\n'), 'JKL': (37.6, 83.32, 'Jackson', 'KY\n'), 'LEX': (38.05, 85.0, 'Lexington', 'KY\n'), 'LOZ': (37.08, 84.07, 'London', 'KY\n'), 'LOU': (38.23, 85.67, 'Louisville', 'KY\n'), 'SDF': (38.18, 85.73, 'Louisville', 'KY\n'), 'OWB': (37.75, 87.17, 'Owensboro', 'KY\n'), 'PAH': (37.07, 88.77, 'Paducah', 'KY\n'), '5I3': (37.48, 82.52, 'Pikeville', 'KY\n'), 'ESF': (31.38, 92.3, 'Alexandria', 'LA\n'), 'BAD': (32.5, 93.67, 'Barksdale', 'LA\n'), 'BTR': (30.53, 91.15, 'Baton Rouge', 'LA\n'), 'BVE': (29.55, 89.67, 'Boothville', 'LA\n'), '7R5': (29.78, 93.3, 'Cameron Heli', 'LA\n'), '01R': (31.22, 92.95, 'Claiborne R', 'LA\n'), 'AEX': (31.33, 92.55, 'England AFB', 'LA\n'), '41I': (28.47, 91.78, 'Eugene Is.', 'LA\n'), 'POE': (31.05, 93.2, 'Fort Polk', 'LA\n'), 'AXO': (29.18, 90.07, 'Grand Isle', 'LA\n'), '5R0': (28.22, 93.75, 'High Is', 'LA\n'), '01T': (28.13, 94.4, 'High Island', 'LA\n'), 'HUM': (29.57, 90.65, 'Houma', 'LA\n'), '7R4': (29.73, 92.12, 'Intercoastal', 'LA\n'), 'LFT': (30.2, 92.0, 'Lafayette', 'LA\n'), 'LCH': (30.12, 93.22, 'Lake Charles', 'LA\n'), '7R3': (29.7, 91.1, 'Lk Palourde', 'LA\n'), '1G7': (28.78, 89.05, 'Missippi Can', 'LA\n'), 'MLU': (32.52, 92.05, 'Monroe', 'LA\n'), 'PTN': (29.7, 91.2, 'Morgan City', 'LA\n'), 'ARA': (30.03, 91.88, 'New Iberia', 'LA\n'), 'MSY': (29.98, 90.25, 'New Orleans', 'LA\n'), 'NBG': (29.83, 90.02, 'New Orleans', 'LA\n'), 'NEW': (30.03, 90.03, 'New Orleans', 'LA\n'), '7R8': (28.3, 91.98, 'S Marsh Isl', 'LA\n'), 'DTN': (32.52, 93.75, 'Shreveport', 'LA\n'),

'SHV': (32.47, 93.82, 'Shreveport', 'LA\n'), 'SIL': (30.35, 89.82, 'Slidell', 'LA\n'), 'AUG': (44.32, 69.8, 'Augusta', 'ME\n'), 'BGR': (44.8, 68.82, 'Bangor', 'ME\n'), 'BHB': (44.45, 68.37, 'Bar Harbor', 'ME\n'), 'NHZ': (43.88, 69.93, 'Brunswick', 'ME\n'), 'CAR': (46.87, 68.02, 'Caribou Mun', 'ME\n'), '3B1': (45.45, 69.55, 'Greenville', 'ME\n'), '6B2': (45.78, 69.63, 'Greenville', 'ME\n'), 'HUL': (46.13, 67.78, 'Houlton', 'ME\n'), 'LIZ': (46.95, 67.88, 'Loring AFB', 'ME\n'), 'PWM': (43.65, 70.32, 'Portland', 'ME\n'), 'PQI': (46.68, 68.05, 'Presque Isle', 'ME\n'), 'RKD': (44.07, 69.12, 'Rockland', 'ME\n'), 'RUM': (44.88, 70.88, 'Rumford', 'ME\n'), 'ADW': (38.82, 76.87, 'Andrews AFB', 'MD\n'), 'BAL': (39.18, 76.67, 'Baltimore', 'MD\n'), 'BWI': (39.18, 76.67, 'Baltimore', 'MD\n'), 'MTN': (39.33, 76.42, 'Baltimore', 'MD\n'), 'FME': (39.08, 76.77, 'Fort Meade', 'MD\n'), 'HGR': (39.7, 77.72, 'Hagerstown', 'MD\n'), 'N80': (38.55, 75.13, 'Ocean City', 'MD\n'), 'NHK': (38.28, 76.4, 'Patuxent', 'MD\n'), 'APG': (39.47, 76.17, 'Phillips', 'MD\n'), 'SBY': (38.33, 75.5, 'Salisbury', 'MD\n'), 'BED': (42.47, 71.28, 'Bedford', 'MA\n'), 'BVY': (42.58, 70.92, 'Beverly', 'MA\n'), 'BOS': (42.37, 71.03, 'Boston', 'MA\n'), '30B': (41.78, 70.5, 'Cape Cod Can', 'MA\n'), 'CHH': (41.67, 69.97, 'Chatham', 'MA\n'), 'AYE': (42.57, 71.6, 'Fort Devens', 'MA\n'), 'HYA': (41.67, 70.28, 'Hyannis', 'MA\n'), 'LWM': (42.72, 71.12, 'Lawrence', 'MA\n'), 'MVY': (41.4, 70.62, 'Marthas Vine', 'MA\n'), 'ACK': (41.25, 70.07, 'Nantucket', 'MA\n'), 'EWB': (41.68, 70.97, 'New Bedford', 'MA\n'), 'OWD': (42.18, 71.18, 'Norwood', 'MA\n'), 'FMH': (41.65, 70.52, 'Otis ANGB', 'MA\n'), 'PSF': (42.26, 73.18, 'Pittsfield', 'MA\n'), 'NZW': (42.15, 70.93, 'S Weymouth', 'MA\n'), 'BAF': (42.17, 72.72, 'Westfield', 'MA\n'), 'CEF': (42.2, 72.53, 'Westover', 'MA\n'), 'ORH': (42.27, 71.87, 'Worcester', 'MA\n'), 'APN': (45.07, 83.57, 'Alpena', 'MI\n'), 'ARB': (42.22, 83.75, 'Ann Arbor', 'MI\n'), 'BTL': (42.3, 85.23, 'Battle Creek', 'MI\n'), 'BEH': (42.13, 86.43, 'Benton Harbor', 'MI\n'), 'CIU': (46.25, 84.47, 'Chippewa', 'MI\n'), 'C10': (43.07, 85.95, 'Coopersville', 'MI\n'), 'P59': (47.47, 87.85, 'Copper Harb', 'MI\n'), 'DET': (42.42, 83.02, 'Detroit', 'MI\n'), 'DTW': (42.23, 83.33, 'Detroit', 'MI\n'), 'ESC': (45.73, 87.08, 'Escanaba', 'MI\n'), 'FNT': (42.97, 83.75, 'Flint/Bishop', 'MI\n'), 'GRR': (42.88, 85.52, 'Grand Rapids', 'MI\n'), 'CMX': (47.17, 88.5, 'Hancock', 'MI\n'), 'P58': (43.83, 82.53, 'Harbor Beach', 'MI\n'), 'HTL': (44.37, 84.68, 'Houghton Lake', 'MI\n'), 'IMT': (45.82, 88.12, 'Iron Mtn', 'MI\n'), 'IWD': (46.53, 90.13, 'Ironwood', 'MI\n'), 'JXN': (42.27, 84.47, 'Jackson', 'MI\n'), 'AZO': (42.23, 85.55, 'Kalamazoo', 'MI\n'), 'LAN': (42.77, 84.6, 'Lansing', 'MI\n'), 'MBL': (44.27, 86.25, 'Manistee', 'MI\n'), 'MQT': (46.88, 87.95, 'Marquette', 'MI\n'), 'MNM': (45.12, 87.63, 'Menominee', 'MI\n'), 'MKG': (43.17, 86.25, 'Muskegon', 'MI\n'), 'PLN': (45.57, 84.8, 'Pellston', 'MI\n'), 'PTK': (42.67, 83.42, 'Pontiac', 'MI\n'), 'MBS': (43.53, 84.08, 'Saginaw', 'MI\n'), 'SSM': (46.47, 84.37, 'Sault Ste M', 'MI\n'), 'SAW': (46.35, 87.4, 'Sawyer AFB', 'MI\n'), 'MTC': (42.62, 82.83, 'Selfridge', 'MI\n'), 'P75': (45.92, 85.92, 'Seul Choix', 'MI\n'), 'TVC': (44.73, 85.58, 'Traverse Cty', 'MI\n'), 'OSC': (44.45, 83.4, 'Wurtsmith', 'MI\n'), 'YIP': (42.23, 83.53, 'Ypsilanti', 'MI\n'), 'AEL': (43.68, 93.37, 'Albert Lea', 'MN\n'), 'AXN': (45.87, 95.38, 'Alexandria', 'MN\n'), 'BJI': (47.5, 94.93, 'Bemidji Muni', 'MN\n'), 'BRD': (46.4, 94.13, 'Brainerd-Crw', 'MN\n'), 'DTL': (46.82, 95.88, 'Detroit Laks', 'MN\n'), 'DLH': (46.83, 92.18, 'Duluth', 'MN\n'), 'ELO': (47.9, 91.82, 'Ely', 'MN\n'), 'FRM': (43.65, 94.42, 'Fairmont', 'MN\n'), 'FFM': (46.3, 96.07, 'Fergus Falls', 'MN\n'), 'GPZ': (47.22, 93.52, 'Grand Rapids', 'MN\n'), 'HIB': (47.38, 92.85, 'Hibbing', 'MN\n'), 'INL': (48.57, 93.38, 'Intl Falls', 'MN\n'), 'Y69': (45.13, 94.52, 'Litchfield',



'MN\n'), 'MKT': (44.22, 93.92, 'Mankato', 'MN\n'), 'MML': (44.45, 95.82, 'Marshall Arpt', 'MN\n'), 'FCM': (44.83, 93.47, 'Minneapolis', 'MN\n'), 'MIC': (45.07, 93.38, 'Minneapolis', 'MN\n'), 'MSP': (44.88, 93.22, 'Minneapolis', 'MN\n'), 'PKD': (46.9, 95.07, 'Park Rapids', 'MN\n'), 'P39': (46.6, 94.32, 'Pequot Lake', 'MN\n'), 'RWF': (44.55, 95.08, 'Redwood Falls', 'MN\n'), 'RST': (43.92, 92.5, 'Rochester', 'MN\n'), 'STP': (44.93, 93.05, 'Saint Paul', 'MN\n'), 'STC': (45.55, 94.07, 'St Cloud', 'MN\n'), 'TVF': (48.07, 96.18, 'Thief River', 'MN\n'), 'P61': (47.58, 90.83, 'Tofte', 'MN\n'), 'D45': (48.93, 95.35, 'Warroad', 'MN\n'), 'OTG': (43.65, 95.58, 'Worthington', 'MN\n'), 'CBM': (33.65, 88.45, 'Columbus AFB', 'MS\n'), 'GTR': (33.45, 88.58, 'Golden Trian', 'MS\n'), 'GLH': (33.48, 90.98, 'Greenville', 'MS\n'), 'GWO': (33.5, 90.08, 'Greenwood', 'MS\n'), 'GPT': (30.4, 89.07, 'Gulfport', 'MS\n'), 'PIB': (31.47, 89.33, 'Hattiesburg', 'MS\n'), 'JAN': (32.32, 90.08, 'Jackson', 'MS\n'), 'BIX': (30.42, 88.92, 'Keesler AFB', 'MS\n'), 'LUL': (31.67, 89.17, 'Laurel', 'MS\n'), 'MCB': (31.18, 90.47, 'Mccomb', 'MS\n'), 'NMM': (32.55, 88.57, 'Meridian NAS', 'MS\n'), 'MEI': (32.33, 88.75, 'Meridian/Key', 'MS\n'), 'HEZ': (31.62, 91.25, 'Natchez', 'MS\n'), 'UOX': (34.39, 89.54, 'Oxford', 'MS\n'), 'TUP': (34.27, 88.77, 'Tupelo', 'MS\n'), 'COU': (38.82, 92.22, 'Columbia', 'MO\n'), 'CGI': (37.23, 89.58, 'Cp Girardeau', 'MO\n'), 'TBN': (37.75, 92.13, 'Ft Leonard', 'MO\n'), 'JEF': (38.6, 92.17, 'Jefferson City', 'MO\n'), 'JLN': (37.17, 94.5, 'Joplin', 'MO\n'), 'MCI': (39.32, 94.72, 'Kansas City', 'MO\n'), 'MKC': (39.12, 94.6, 'Kansas City', 'MO\n'), 'IRK': (40.1, 92.55, 'Kirksville', 'MO\n'), 'UMN': (37.33, 94.35, 'Monett', 'MO\n'), 'MKO': (35.66, 95.36, 'Muskogee', 'MO\n'), 'P02': (36.77, 90.47, 'Poplar Bluff', 'MO\n'), 'GVW': (38.85, 94.55, 'Richards-Geb', 'MO\n'), 'P35': (40.25, 93.72, 'Spickard', 'MO\n'), 'SGF': (37.23, 93.38, 'Springfield', 'MO\n'), 'STJ': (40.28, 95.53, 'St Joseph', 'MO\n'), 'STL': (38.75, 90.37, 'St Louis', 'MO\n'), 'SUS': (38.65, 90.63, 'StLouis/Spirit', 'MO\n'), 'VIH': (38.13, 91.77, 'Vichy/Rolla', 'MO\n'), 'H63': (37.22, 92.42, 'West Plains', 'MO\n'), 'UNO': (36.88, 91.9, 'West Plains', 'MO\n'), 'SZL': (38.73, 93.55, 'Whiteman AFB', 'MO\n'), 'BIL': (45.8, 108.53, 'Billings', 'MT\n'), 'BZN': (45.78, 111.15, 'Bozeman', 'MT\n'), '4BQ': (45.67, 105.67, 'Broadus', 'MT\n'), 'BTM': (45.95, 112.5, 'Butte', 'MT\n'), 'CTB': (48.6, 112.37, 'Cut Bank', 'MT\n'), 'DLN': (45.25, 112.55, 'Dillon', 'MT\n'), '3DU': (46.67, 113.15, 'Drummond', 'MT\n'), 'GGW': (48.22, 106.62, 'Glasgow', 'MT\n'), 'GDV': (47.13, 104.8, 'Glendive', 'MT\n'), 'GTF': (47.48, 111.37, 'Great Falls', 'MT\n'), '3HT': (46.43, 109.83, 'Harlowton', 'MT\n'), 'HVR': (48.55, 109.77, 'Havre', 'MT\n'), 'HLN': (46.6, 112.0, 'Helena', 'MT\n'), 'JDN': (47.33, 106.93, 'Jordan', 'MT\n'), 'FCA': (48.3, 114.27, 'Kalispell', 'MT\n'), 'LWT': (47.05, 109.45, 'Lewiston', 'MT\n'), 'LVM': (45.7, 110.43, 'Livingston', 'MT\n'), 'GFA': (47.5, 111.18, 'Malmstrom', 'MT\n'), 'MLS': (46.43, 105.87, 'Miles City', 'MT\n'), 'MSO': (46.92, 114.08, 'Missoula', 'MT\n'), 'MQM': (44.57, 112.32, 'Monida', 'MT\n'), 'SDY': (47.72, 104.18, 'Sidney', 'MT\n'), '3TH': (47.6, 115.37, 'Thompson Fal', 'MT\n'), 'WEY': (44.65, 111.1, 'W Yellowston', 'MT\n'), 'WYS': (44.68, 111.12, 'W Yellowston', 'MT\n'), 'OLF': (48.1, 105.58, 'Wolf Point', 'MT\n'), 'ANW': (42.58, 99.98, 'Ainsworth', 'NE\n'), 'AIA': (42.05, 102.8, 'Alliance', 'NE\n'), 'BIE': (40.32, 96.75, 'Beatrice', 'NE\n'), 'BBW': (41.43, 99.65, 'Broken Bow', 'NE\n'), 'BUB': (41.78, 99.15, 'Burwell', 'NE\n'), 'CDR': (42.83, 103.08, 'Chadron', 'NE\n'), 'OLU': (41.45, 97.35, 'Columbus', 'NE\n'), 'CZD': (40.87, 100.0, 'Cozad', 'NE\n'), 'FNB': (40.07, 95.58, 'Falls City', 'NE\n'), 'GRI': (40.97, 98.32, 'Grand Island', 'NE\n'), 'HSI': (40.6, 98.43, 'Hastings', 'NE\n'), '6V1': (40.33, 101.39, 'Imperial', 'NE\n'), 'IML': (40.53, 101.63, 'Imperial',

'NE\n'), 'EAR': (40.73, 99.0, 'Kearney', 'NE\n'), 'LNK': (40.85, 96.75, 'Lincoln Muni', 'NE\n'), 'MCK': (40.22, 100.58, 'Mccook', 'NE\n'), 'MHN': (42.05, 101.05, 'Mullen', 'NE\n'), 'OFK': (41.98, 97.43, 'Norfolk', 'NE\n'), 'OVN': (41.37, 96.02, 'North Omaha', 'NE\n'), 'LBF': (41.13, 100.68, 'North Platte', 'NE\n'), 'ONL': (42.47, 98.68, "O'neill", 'NE\n'), 'OFF': (41.12, 95.92, 'Offutt AFB', 'NE\n'), 'OMA': (41.3, 95.9, 'Omaha/Eppley', 'NE\n'), 'ODX': (41.62, 98.95, 'Ord/Sharp', 'NE\n'), 'BFF': (41.87, 103.6, 'Scottsbluff', 'NE\n'), 'SNY': (41.1, 102.98, 'Sidney Muni', 'NE\n'), 'VTN': (42.87, 100.55, 'Valentine', 'NE\n'), 'AUI': (39.83, 117.13, 'Austin', 'NV\n'), 'U31': (39.5, 117.08, 'Austin', 'NV\n'), 'BAM': (40.62, 116.87, 'Battle Mtn', 'NV\n'), 'P38': (37.62, 114.52, 'Caliente', 'NV\n'), 'EK0': (40.83, 115.78, 'Elko', 'NV\n'), 'ELY': (39.28, 114.85, 'Ely/Yelland', 'NV\n'), 'P68': (39.5, 115.97, 'Eureka', 'NV\n'), 'NFL': (39.42, 118.7, 'Fallon NAS', 'NV\n'), 'HTH': (38.55, 118.63, 'Hawthorne', 'NV\n'), 'L63': (36.53, 115.57, 'Ind Sprng Rn', 'NV\n'), 'L76': (36.57, 115.67, 'Ind Sprng Rn', 'NV\n'), 'LAS': (36.08, 115.17, 'Las Vegas', 'NV\n'), 'LOL': (40.1, 118.92, 'Loveland', 'NV\n'), 'DRA': (36.62, 116.02, 'Mercury', 'NV\n'), 'LSV': (36.23, 115.03, 'Nellis AFB', 'NV\n'), 'OWY': (42.58, 116.17, 'Owyhee', 'NV\n'), 'RNO': (39.5, 119.78, 'Reno', 'NV\n'), 'TPH': (38.07, 117.08, 'Tonopah', 'NV\n'), 'AWH': (41.33, 116.25, 'Wildhorse', 'NV\n'), 'WMC': (40.9, 117.8, 'Winnemucca', 'NV\n'), 'UCC': (37.58, 116.08, 'Yucca Flat', 'NV\n'), 'BML': (44.58, 71.18, 'Berlin', 'NH\n'), 'CON': (43.2, 71.5, 'Concord', 'NH\n'), 'AFN': (42.8, 72.0, 'Jaffrey', 'NH\n'), 'EEN': (42.9, 72.27, 'Keene', 'NH\n'), 'LCI': (43.57, 71.43, 'Laconia', 'NH\n'), 'LEB': (43.63, 72.3, 'Lebanon', 'NH\n'), 'MHT': (42.93, 71.43, 'Manchester', 'NH\n'), 'MWN': (44.27, 71.3, 'Mt Washington', 'NH\n'), 'ASH': (42.78, 71.52, 'Nashua', 'NH\n'), 'PSM': (43.08, 70.82, 'Pease AFB', 'NH\n'), '8B8': (44.0, 71.38, 'Wolfeboro', 'NH\n'), 'ACY': (39.45, 74.57, 'Atlantic Cty', 'NJ\n'), 'N78': (40.28, 74.28, 'Barnegat Ls', 'NJ\n'), 'CDW': (40.87, 74.28, 'Fairfield', 'NJ\n'), 'NEL': (40.03, 74.35, 'Lakehurst', 'NJ\n'), 'WRI': (40.02, 74.6, 'Mcguire AFB', 'NJ\n'), 'MIV': (39.37, 75.07, 'Millville', 'NJ\n'), 'MMU': (40.8, 74.42, 'Morristown', 'NJ\n'), 'EWR': (40.7, 74.17, 'Newark Intl', 'NJ\n'), 'TEB': (40.85, 74.05, 'Teterboro', 'NJ\n'), 'TTN': (40.28, 74.82, 'Trenton', 'NJ\n'), 'ABQ': (35.05, 106.6, 'Albuquerque', 'NM\n'), 'CVS': (34.38, 103.32, 'Cannon', 'NM\n'), 'CNM': (32.33, 104.27, 'Carlsbad', 'NM\n'), 'CA0': (36.45, 103.15, 'Clayton Arpt', 'NM\n'), '4CR': (34.1, 105.68, 'Corona', 'NM\n'), '4SL': (36.02, 106.95, 'Cuba Awrs', 'NM\n'), 'DMN': (32.25, 107.7, 'Deming', 'NM\n'), 'FMN': (36.75, 108.23, 'Farmington', 'NM\n'), 'GUP': (35.52, 108.78, 'Gallup/Clark', 'NM\n'), 'GNT': (35.17, 107.9, 'Grants', 'NM\n'), 'HOB': (32.68, 103.2, 'Hobbs', 'NM\n'), 'HMN': (32.85, 106.1, 'Holloman AFB', 'NM\n'), 'LRU': (32.3, 106.77, 'Las Cruces', 'NM\n'), 'LVS': (35.65, 105.15, 'Las Vegas', 'NM\n'), 'LAM': (35.88, 106.28, 'Los Alamos', 'NM\n'), '4MY': (34.98, 106.05, 'Moriarity', 'NM\n'), 'E28': (32.9, 106.4, 'Northrup Str', 'NM\n'), 'RTN': (36.74, 104.5, 'Raton', 'NM\n'), 'ROW': (33.3, 104.53, 'Roswell', 'NM\n'), 'SAF': (35.62, 106.08, 'Santa Fe', 'NM\n'), 'SVC': (32.63, 108.17, 'Silver City', 'NM\n'), 'ONM': (34.07, 106.9, 'Socorro', 'NM\n'), 'E23': (36.42, 105.57, 'Taos', 'NM\n'), 'TCS': (33.23, 107.27, 'Truth Or Con', 'NM\n'), 'TCC': (35.18, 103.6, 'Tucumcari', 'NM\n'), '2C2': (32.63, 106.4, 'White Sands', 'NM\n'), 'ALB': (42.75, 73.8, 'Albany', 'NY\n'), 'N28': (40.75, 74.37, 'Ambrose', 'NY\n'), 'BGM': (42.22, 75.98, 'Binghamton', 'NY\n'), 'BUF': (42.93, 78.73, 'Buffalo', 'NY\n'), 'DSV': (42.97, 78.2, 'Dansville', 'NY\n'), 'ELM': (42.17, 76.9, 'Elmira', 'NY\n'), 'FRG': (40.73, 73.43, 'Farmingdale', 'NY\n'), 'GTB': (44.05, 75.73, 'Fort Drum', 'NY\n'), 'GFL':

(43.35, 73.62, 'Glens Falls', 'NY\n'), 'RME': (43.23, 75.4, 'Griffiss AFB', 'NY\n'), 'ISP': (40.78, 73.1, 'Islip', 'NY\n'), 'ITH': (42.48, 76.47, 'Ithaca', 'NY\n'), 'JHW': (42.15, 79.25, 'Jamestown', 'NY\n'), 'MSS': (44.93, 74.85, 'Massena', 'NY\n'), 'MSV': (41.7, 74.8, 'Monticello', 'NY\n'), 'NYC': (40.77, 73.98, 'New York', 'NY\n'), 'JFK': (40.65, 73.78, 'New York/JFK', 'NY\n'), 'LGA': (40.77, 73.9, 'New York/LGA', 'NY\n'), 'SWF': (41.5, 74.1, 'Newburgh', 'NY\n'), 'IAG': (43.1, 78.95, 'Niagara Fall', 'NY\n'), 'OGS': (44.68, 75.4, 'Ogdensburg', 'NY\n'), 'N66': (42.87, 75.12, 'Oneonta', 'NY\n'), 'PBG': (44.65, 73.47, 'Plattsburgh', 'NY\n'), 'POU': (41.63, 73.88, 'Poughkeepsie', 'NY\n'), 'ROC': (43.12, 77.67, 'Rochester', 'NY\n'), 'SLK': (44.38, 74.2, 'Saranac Lk', 'NY\n'), 'SCH': (42.85, 73.93, 'Schenectady', 'NY\n'), 'SYR': (43.12, 76.12, 'Syracuse', 'NY\n'), 'UCA': (43.15, 75.38, 'Utica', 'NY\n'), 'ART': (44.0, 76.02, 'Watertown', 'NY\n'), 'FOK': (40.85, 72.63, 'Westhampton', 'NY\n'), 'HPN': (41.07, 73.72, 'White Plains', 'NY\n'), 'AVL': (35.43, 82.55, 'Asheville', 'NC\n'), 'HAT': (35.27, 75.55, 'Cape Hattera', 'NC\n'), 'CLT': (35.22, 80.93, 'Charlotte', 'NC\n'), 'NKT': (34.9, 76.88, 'Cherry Point', 'NC\n'), '2DP': (36.13, 76.5, 'Dare Co Gr', 'NC\n'), '44W': (35.25, 75.5, 'Diamond Sho', 'NC\n'), 'ECG': (36.27, 76.18, 'Elizabeth', 'NC\n'), 'FAY': (35.0, 78.88, 'Fayetteville', 'NC\n'), 'FBG': (35.13, 78.93, 'Fort Bragg', 'NC\n'), 'GSO': (36.08, 79.95, 'Greensboro', 'NC\n'), 'HKY': (35.75, 81.38, 'Hickory', 'NC\n'), 'HSS': (35.9, 82.82, 'Hot Springs', 'NC\n'), 'OAJ': (34.82, 77.62, 'Jacksonville', 'NC\n'), 'ISO': (35.32, 77.63, 'Kinston', 'NC\n'), 'HFF': (35.03, 79.5, 'Mackall Aaf', 'NC\n'), 'MQI': (35.92, 75.68, 'Manteo Arpt', 'NC\n'), 'EWN': (35.08, 77.05, 'New Bern', 'NC\n'), 'NCA': (34.7, 77.43, 'New River', 'NC\n'), 'POB': (35.17, 79.02, 'Pope AFB', 'NC\n'), 'RDU': (35.87, 78.78, 'Raleigh-Durh', 'NC\n'), 'RWI': (35.85, 77.88, 'Rocky Mt', 'NC\n'), 'GSB': (35.33, 77.97, 'Seymour-John', 'NC\n'), 'SOP': (35.24, 79.39, 'Southern Pin', 'NC\n'), 'ILM': (34.27, 77.92, 'Wilmington', 'NC\n'), 'INT': (36.13, 80.23, 'Winston-Salem', 'NC\n'), 'BIS': (46.77, 100.75, 'Bismarck', 'ND\n'), 'DVL': (48.12, 98.9, "Devil's Lake", 'ND\n'), 'P11': (48.1, 98.87, "Devil's Lake", 'ND\n'), 'DIK': (46.78, 102.8, 'Dickenson', 'ND\n'), 'FAR': (46.9, 96.8, 'Fargo', 'ND\n'), 'GFK': (47.95, 97.18, 'Grand Forks', 'ND\n'), 'RDR': (47.97, 97.4, 'Grand Forks', 'ND\n'), 'JMS': (46.92, 98.68, 'Jamestown', 'ND\n'), 'P67': (46.1, 97.15, 'Lidgerwood', 'ND\n'), 'MIB': (48.42, 101.35, 'Minot AFB', 'ND\n'), 'MOT': (48.27, 101.28, 'Minot Intl', 'ND\n'), 'P24': (47.75, 101.83, 'Roseglen', 'ND\n'), 'ISN': (48.18, 103.63, 'Williston', 'ND\n'), 'UNI': (39.21, 82.23, 'Athens/Albany', 'OH\n'), 'CAK': (40.92, 81.43, 'Canton', 'OH\n'), 'CVG': (39.05, 84.67, 'Cincinnati', 'OH\n'), 'LUK': (39.1, 84.43, 'Cincinnati', 'OH\n'), 'BKL': (41.52, 81.68, 'Cleveland', 'OH\n'), 'CGF': (41.57, 81.48, 'Cleveland', 'OH\n'), 'CLE': (41.42, 81.87, 'Cleveland', 'OH\n'), 'CMH': (40.0, 82.88, 'Columbus', 'OH\n'), 'OSU': (40.08, 83.07, 'Columbus Osu', 'OH\n'), 'DAY': (39.9, 84.2, 'Dayton', 'OH\n'), 'FDY': (41.02, 83.67, 'Findlay', 'OH\n'), 'MFD': (40.82, 82.52, 'Mansfield', 'OH\n'), 'LCK': (39.82, 82.93, 'Rickenbacker', 'OH\n'), 'TOL': (41.6, 83.8, 'Toledo', 'OH\n'), 'LNN': (41.63, 81.4, 'Willoughby', 'OH\n'), 'FFO': (39.83, 84.05, 'Wright-Pat AFB', 'OH\n'), 'YNG': (41.27, 80.67, 'Youngstown', 'OH\n'), 'ZZV': (39.95, 81.9, 'Zanesville', 'OH\n'), 'LTS': (34.67, 99.27, 'Altus AFB', 'OK\n'), 'ADM': (34.3, 97.02, 'Ardmore', 'OK\n'), 'BVO': (36.75, 96.0, 'Bartlesville', 'OK\n'), 'CSM': (35.35, 99.2, 'Clinton', 'OK\n'), 'WDG': (36.38, 97.8, 'Enid', 'OK\n'), 'FSI': (34.65, 98.4, 'Fort Sill', 'OK\n'), 'GAG': (36.3, 99.77, 'Gage', 'OK\n'), 'HBR': (35.0, 99.05, 'Hobart', 'OK\n'), 'LAW': (34.57, 98.42, 'Lawton', 'OK\n'), 'MLC': (34.88, 95.78, 'Mcalester', 'OK\n'), 'OUN': (35.23,

97.47, 'Norman', 'OK\n'), 'OKC': (35.4, 97.6, 'Oklahoma Cty', 'OK\n'), 'PWA': (35.53, 97.65, 'Oklahoma Cty', 'OK\n'), 'PGO': (34.68, 94.62, 'Page', 'OK\n'), 'PNC': (36.73, 97.1, 'Ponca City', 'OK\n'), 'SWO': (36.16, 97.09, 'Stillwater', 'OK\n'), 'TIK': (35.42, 97.38, 'Tinker AFB', 'OK\n'), 'TUL': (36.2, 95.9, 'Tulsa', 'OK\n'), 'END': (36.33, 97.92, 'Vance AFB', 'OK\n'), 'AST': (46.15, 123.88, 'Astoria', 'OR\n'), '3S2': (45.25, 122.75, 'Aurora', 'OR\n'), 'BKE': (44.83, 117.82, 'Baker', 'OR\n'), '4BK': (42.08, 124.47, 'Brookings', 'OR\n'), 'BNO': (43.6, 118.95, 'Burns Arpt', 'OR\n'), '92S': (43.38, 124.95, 'Cape Blanco', 'OR\n'), 'CZK': (45.68, 121.88, 'Cascade', 'OR\n'), 'CVO': (44.5, 123.28, 'Corvallis', 'OR\n'), 'EUG': (44.12, 123.22, 'Eugene', 'OR\n'), 'HIO': (45.53, 122.95, 'Hillsboro', 'OR\n'), 'LMT': (42.15, 121.73, 'Klamath Fall', 'OR\n'), 'LGD': (45.28, 118.0, 'La Grande', 'OR\n'), '4LW': (42.18, 120.35, 'Lake View', 'OR\n'), 'MEH': (45.5, 118.4, 'Meacham', 'OR\n'), 'MFR': (42.37, 122.87, 'Medford', 'OR\n'), 'ONP': (44.63, 124.05, 'Newport', 'OR\n'), 'OTH': (43.42, 124.25, 'North Bend', 'OR\n'), 'ONO': (44.02, 117.02, 'Ontario', 'OR\n'), 'PDT': (45.68, 118.85, 'Pendleton', 'OR\n'), 'PDX': (45.6, 122.6, 'Portland', 'OR\n'), 'RDM': (44.27, 121.15, 'Redmond', 'OR\n'), 'RBG': (43.23, 123.37, 'Roseburg', 'OR\n'), 'SLE': (44.92, 123.0, 'Salem', 'OR\n'), 'SXT': (42.62, 123.37, 'Sexton', 'OR\n'), 'DLS': (45.62, 121.15, 'The Dalles', 'OR\n'), 'TTD': (45.55, 122.4, 'Troutdale', 'OR\n'), 'ABE': (40.65, 75.43, 'Allentown', 'PA\n'), 'A00': (40.3, 78.32, 'Altoona', 'PA\n'), 'BVI': (40.75, 80.33, 'Beaver Falls', 'PA\n'), 'BSI': (40.27, 79.09, 'Blairsville', 'PA\n'), 'BFD': (41.8, 78.63, 'Bradford', 'PA\n'), 'DUJ': (41.18, 78.9, 'Dubois', 'PA\n'), 'ERI': (42.08, 80.18, 'Erie', 'PA\n'), 'FKL': (41.38, 79.87, 'Franklin', 'PA\n'), 'CXY': (40.22, 76.85, 'Harrisburg', 'PA\n'), 'HAR': (40.37, 77.42, 'Harrisburg', 'PA\n'), 'JST': (40.32, 78.83, 'Johnstown', 'PA\n'), 'LNS': (40.13, 76.3, 'Lancaster', 'PA\n'), 'LBE': (40.28, 79.4, 'Latrobe', 'PA\n'), 'MDT': (40.2, 76.77, 'Middletown', 'PA\n'), 'MUI': (40.43, 76.57, 'Muir', 'PA\n'), 'PNE': (40.08, 75.02, 'Nth Philadel', 'PA\n'), 'PHL': (39.88, 75.25, 'Philadelphia', 'PA\n'), 'PSB': (41.47, 78.13, 'Philipsburg', 'PA\n'), 'AGC': (40.35, 79.93, 'Pittsburgh', 'PA\n'), 'PIT': (40.5, 80.22, 'Pittsburgh', 'PA\n'), 'RDG': (40.38, 75.97, 'Reading', 'PA\n'), '43M': (39.73, 77.43, 'Site R', 'PA\n'), 'UNV': (40.85, 77.83, 'State Colleg', 'PA\n'), 'AVP': (41.33, 75.73, 'Wilkes-Barre', 'PA\n'), 'IPT': (41.25, 76.92, 'Williamsport', 'PA\n'), 'NXX': (40.2, 75.15, 'Willow Grove', 'PA\n'), 'BID': (41.17, 71.58, 'Block Island', 'RI\n'), 'OQU': (41.6, 71.42, 'Nth Kingston', 'RI\n'), 'PVD': (41.73, 71.43, 'Providence', 'RI\n'), 'NCO': (41.36, 71.25, 'Quonset Pt NAS', 'RI\n'), 'AND': (34.5, 82.72, 'Anderson', 'SC\n'), 'NBC': (32.48, 80.72, 'Beaufort Mca', 'SC\n'), 'CHS': (32.9, 80.03, 'Charleston', 'SC\n'), 'CAE': (33.95, 81.12, 'Columbia', 'SC\n'), 'FLO': (34.18, 79.72, 'Florence', 'SC\n'), 'GMU': (34.85, 82.35, 'Greenville', 'SC\n'), 'GSP': (34.9, 82.22, 'Greenville', 'SC\n'), 'MMT': (33.92, 80.8, 'Mcentire', 'SC\n'), 'MYR': (33.68, 78.93, 'Myrtle Beach', 'SC\n'), 'CRE': (33.82, 78.72, 'Nth Myrtle B', 'SC\n'), 'SSC': (33.97, 80.47, 'Shaw AFB', 'SC\n'), 'SPA': (34.92, 81.96, 'Spartanburg', 'SC\n'), 'ABR': (45.45, 98.43, 'Aberdeen', 'SD\n'), 'BKX': (44.3, 96.8, 'Brookings', 'SD\n'), '9V9': (43.8, 99.32, 'Chamberlain', 'SD\n'), 'CHB': (43.75, 99.32, 'Chamberlain', 'SD\n'), '0V1': (43.77, 103.6, 'Custer', 'SD\n'), 'RCA': (44.15, 103.1, 'Ellsworth Af', 'SD\n'), 'HON': (44.38, 98.22, 'Huron', 'SD\n'), 'Y22': (45.93, 102.17, 'Lemmon', 'SD\n'), 'MHE': (43.77, 98.03, 'Mitchell', 'SD\n'), 'Y26': (45.53, 100.43, 'Mobridge', 'SD\n'), 'P05': (44.05, 101.6, 'Philip', 'SD\n'), 'PHP': (44.05, 101.6, 'Philip', 'SD\n'), 'PIR': (44.38, 100.28, 'Pierre', 'SD\n'), 'RAP': (44.05, 103.07, 'Rapid City',

'SD\n'), 'REJ': (45.16, 103.32, 'Redig', 'SD\n'), 'FSD': (43.58, 96.73, 'Sioux Falls', 'SD\n'), 'ATY': (44.92, 97.15, 'Watertown', 'SD\n'), 'YKN': (42.92, 97.38, 'Yankton', 'SD\n'), 'TRI': (36.48, 82.4, 'Bristol', 'TN\n'), 'CHA': (35.03, 85.2, 'Chattanooga', 'TN\n'), 'CKV': (36.62, 87.42, 'Clarksville', 'TN\n'), 'CSV': (35.95, 85.08, 'Crossville', 'TN\n'), 'DYR': (36.02, 89.4, 'Dyersburg', 'TN\n'), 'MKL': (35.6, 88.92, 'Jackson', 'TN\n'), 'TYS': (35.82, 83.98, 'Knoxville', 'TN\n'), 'MEM': (35.05, 90.0, 'Memphis Intl', 'TN\n'), 'NQA': (35.35, 89.87, 'Memphis NAS', 'TN\n'), 'MGL': (35.15, 85.51, 'Monteagle', 'TN\n'), 'BNA': (36.12, 86.68, 'Nashville', 'TN\n'), 'MQY': (36.0, 86.5, 'Smyrna', 'TN\n'), 'ABI': (32.42, 99.68, 'Abilene', 'TX\n'), 'ALI': (27.73, 98.03, 'Alice', 'TX\n'), 'AMA': (35.23, 101.7, 'Amarillo', 'TX\n'), 'AUS': (30.3, 97.7, 'Austin', 'TX\n'), 'BSM': (30.2, 97.68, 'Bergstrom Af', 'TX\n'), 'BGS': (32.39, 101.48, 'Big Sky', 'TX\n'), 'HCA': (32.3, 101.45, 'Big Spring', 'TX\n'), 'BRO': (25.9, 97.43, 'Brownsville', 'TX\n'), 'BWD': (31.79, 98.96, 'Brownwood', 'TX\n'), 'FWH': (32.78, 97.43, 'Carswell AFB', 'TX\n'), 'NIR': (28.37, 97.67, 'Chase NAS', 'TX\n'), 'CDS': (34.43, 100.28, 'Childress', 'TX\n'), 'CLL': (30.58, 96.37, 'College Stn', 'TX\n'), 'CRP': (27.77, 97.5, 'Corpus Chrst', 'TX\n'), 'NGP': (27.7, 97.28, 'Corpus Chrst', 'TX\n'), 'COT': (28.45, 99.22, 'Cotulla', 'TX\n'), 'DWH': (30.07, 95.55, 'D.w. Hooks', 'TX\n'), 'DHT': (36.02, 102.55, 'Dalhart', 'TX\n'), 'NBE': (32.73, 96.97, 'Dallas NAS', 'TX\n'), 'ADS': (32.97, 96.83, 'Dallas/Addis', 'TX\n'), 'DFW': (32.9, 97.03, 'Dallas/FW', 'TX\n'), 'DAL': (32.85, 96.85, 'Dallas/Love', 'TX\n'), 'RBD': (32.68, 96.87, 'Dallas/Redbr', 'TX\n'), 'DRT': (29.37, 100.92, 'Del Rio', 'TX\n'), 'DYS': (32.43, 99.85, 'Dyess AFB', 'TX\n'), 'ELP': (31.8, 106.4, 'El Paso', 'TX\n'), 'EFD': (29.62, 95.17, 'Ellington Af', 'TX\n'), 'FTW': (32.82, 97.35, 'Fort Worth', 'TX\n'), 'HLR': (31.15, 97.72, 'Ft Hood Aaf', 'TX\n'), 'GLS': (29.27, 94.87, 'Galveston', 'TX\n'), 'GRK': (31.07, 97.83, 'Gray AFB', 'TX\n'), 'GVT': (33.07, 96.07, 'Greenville', 'TX\n'), 'GDP': (31.83, 104.8, 'Guadalupe Ps', 'TX\n'), 'HRL': (26.23, 97.67, 'Harlingen', 'TX\n'), 'HDO': (29.35, 99.17, 'Hondo', 'TX\n'), 'IAH': (29.97, 95.35, 'Houston', 'TX\n'), 'HOU': (29.65, 95.28, 'Houston/Hobby', 'TX\n'), 'JCT': (30.5, 99.77, 'Junction', 'TX\n'), 'SKF': (29.38, 98.58, 'Kelly AFB', 'TX\n'), 'ERV': (29.98, 99.08, 'Kerrville', 'TX\n'), 'ILE': (31.08, 97.68, 'Killeen', 'TX\n'), 'NQI': (27.5, 97.82, 'Kingsville', 'TX\n'), 'LRD': (27.53, 99.47, 'Laredo Intl', 'TX\n'), 'DLF': (29.37, 100.78, 'Laughlin AFB', 'TX\n'), 'GGG': (32.38, 94.72, 'Longview', 'TX\n'), 'LBB': (33.65, 101.82, 'Lubbock', 'TX\n'), 'LFK': (31.23, 94.75, 'Lufkin', 'TX\n'), 'MRF': (30.37, 104.02, 'Marfa', 'TX\n'), 'MFE': (26.18, 98.23, 'McAllen', 'TX\n'), 'MAF': (31.95, 102.18, 'Midland', 'TX\n'), 'MWL': (32.78, 98.07, 'Mineral Wlls', 'TX\n'), 'PSX': (28.72, 96.25, 'Palacios', 'TX\n'), 'PRX': (33.63, 95.45, 'Paris/Cox', 'TX\n'), 'PVW': (34.17, 101.71, 'Plainview', 'TX\n'), 'BPT': (30.58, 94.02, 'Port Arthur', 'TX\n'), 'RND': (29.53, 98.28, 'Randolph AFB', 'TX\n'), 'REE': (33.6, 102.05, 'Reese AFB', 'TX\n'), 'RKP': (28.08, 97.03, 'Rockport', 'TX\n'), 'SJT': (31.37, 100.5, 'San Angelo', 'TX\n'), 'SAT': (29.53, 98.47, 'San Antonio', 'TX\n'), 'SSF': (29.33, 98.47, 'San Antonio', 'TX\n'), 'P07': (30.17, 102.42, 'Sanderson', 'TX\n'), 'F39': (33.72, 96.67, 'Sherman-Deni', 'TX\n'), 'T46': (28.03, 95.87, 'South Brazos', 'TX\n'), 'SEP': (32.22, 98.18, 'Stephenville', 'TX\n'), 'TPL': (31.15, 97.42, 'Temple', 'TX\n'), 'TYR': (32.37, 95.4, 'Tyler/Pounds', 'TX\n'), 'VCT': (28.85, 96.92, 'Victoria', 'TX\n'), 'ACT': (31.62, 97.22, 'Waco-Madison', 'TX\n'), 'SPS': (33.98, 98.5, 'Wichita Flls', 'TX\n'), 'INK': (31.78, 103.2, 'Wink', 'TX\n'), '4BL': (38.03, 109.78, 'Blanding', 'UT\n'), 'U17': (37.5, 110.7, 'Bullfrog Mar', 'UT\n'), 'CDC': (37.7, 113.1, 'Cedar City',



'UT\n'), 'U24': (39.33, 112.58, 'Delta', 'UT\n'), 'DPG': (40.2, 112.93, 'Dugway Prvgr', 'UT\n'), 'U16': (41.05, 113.07, 'Eagle Range', 'UT\n'), 'U28': (39.0, 110.15, 'Green River', 'UT\n'), '4HV': (38.37, 110.72, 'Hanksville', 'UT\n'), 'HIF': (41.12, 111.97, 'Hill AFB', 'UT\n'), 'LGU': (41.78, 111.85, 'Logan', 'UT\n'), 'MLF': (38.72, 113.03, 'Milford', 'UT\n'), 'CNY': (38.77, 109.75, 'Moab', 'UT\n'), 'OGD': (41.18, 112.02, 'Ogden', 'UT\n'), 'PUC': (39.62, 110.75, 'Price/Carbon', 'UT\n'), 'PVU': (40.22, 111.72, 'Provo', 'UT\n'), 'U67': (40.5, 110.63, 'Roosevelt', 'UT\n'), 'SGU': (37.08, 113.6, 'Saint George', 'UT\n'), 'SLC': (40.78, 111.97, 'Salt Lake Ct', 'UT\n'), 'T62': (40.17, 112.2, 'Tooele', 'UT\n'), 'VEL': (40.45, 109.52, 'Vernal', 'UT\n'), 'ENV': (41.22, 114.05, 'Wendover', 'UT\n'), 'BTV': (44.47, 73.15, 'Burlington', 'VT\n'), 'MPV': (44.2, 72.57, 'Montpelier', 'VT\n'), 'EFK': (45.55, 72.33, 'Newport', 'VT\n'), 'RUT': (43.53, 73.95, 'Rutland', 'VT\n'), '9B2': (44.42, 72.02, 'St Johnsbury', 'VT\n'), 'MNW': (42.88, 72.88, 'Wilmington', 'VT\n'), 'CHO': (38.13, 78.45, 'Charlottesvi', 'VA\n'), 'W39': (37.5, 76.2, 'Chesapeake', 'VA\n'), 'DAN': (36.57, 79.33, 'Danville', 'VA\n'), 'DAA': (38.72, 77.18, 'Fort Belvoir', 'VA\n'), 'FAF': (37.13, 76.62, 'Fort Eustis', 'VA\n'), 'HSP': (37.95, 79.82, 'Hot Springs', 'VA\n'), 'LFI': (37.08, 76.37, 'Langley AFB', 'VA\n'), 'LYH': (37.33, 79.2, 'Lynchburg', 'VA\n'), 'PHF': (37.13, 76.5, 'Newport News', 'VA\n'), 'NGU': (36.93, 76.28, 'Norfolk NAS', 'VA\n'), 'ORF': (36.9, 76.2, 'Norfolk Rgnl', 'VA\n'), 'NTU': (36.82, 76.03, 'Oceana NAS', 'VA\n'), 'NYG': (38.5, 77.3, 'Quantico Mca', 'VA\n'), 'RIC': (37.5, 77.33, 'Richmond', 'VA\n'), 'ROA': (37.32, 79.97, 'Roanoke Muni', 'VA\n'), 'SHD': (38.27, 78.85, 'Staunton', 'VA\n'), 'VQN': (36.95, 78.98, 'Volens', 'VA\n'), 'WAL': (37.85, 75.48, 'Wallops Sta', 'VA\n'), 'BLI': (48.8, 122.53, 'Bellingham', 'WA\n'), 'PWT': (47.48, 122.77, 'Bremerton', 'WA\n'), '75S': (48.5, 122.33, 'Burlington', 'WA\n'), '63S': (48.88, 118.47, 'Colville', 'WA\n'), 'EPH': (47.32, 119.52, 'Ephrata', 'WA\n'), 'PAE': (47.92, 122.28, 'Everet/Paine', 'WA\n'), 'SKA': (47.62, 117.65, 'Fairchild', 'WA\n'), 'GRF': (47.08, 122.58, 'Fort Lewis', 'WA\n'), 'HMS': (46.57, 119.6, 'Hanford', 'WA\n'), 'HQM': (46.97, 123.97, 'Hoquiam', 'WA\n'), 'TCM': (47.15, 122.48, 'McChord AFB', 'WA\n'), 'MWH': (47.2, 119.32, 'Moses Lake', 'WA\n'), '76S': (48.25, 122.68, 'Oak Harbor', 'WA\n'), 'OLM': (46.97, 122.9, 'Olympia', 'WA\n'), '40M': (48.42, 119.53, 'Omak', 'WA\n'), 'PSC': (46.27, 119.12, 'Pasco', 'WA\n'), 'CLM': (48.12, 123.5, 'Port Angeles', 'WA\n'), 'NOW': (48.22, 123.67, 'Port Angeles', 'WA\n'), 'PUW': (46.75, 117.12, 'Pullman', 'WA\n'), 'UIL': (47.95, 124.55, 'Quillayute', 'WA\n'), 'RNT': (47.5, 122.22, 'Renton', 'WA\n'), 'SEA': (47.45, 122.3, 'Seattle', 'WA\n'), 'BFI': (47.53, 122.3, 'Seattle/Boeing', 'WA\n'), 'SHN': (47.25, 123.15, 'Shelton', 'WA\n'), 'GEG': (47.63, 117.53, 'Spokane', 'WA\n'), 'SFF': (47.67, 117.33, 'Spokane', 'WA\n'), 'SMP': (47.28, 121.33, 'Stampede Pas', 'WA\n'), 'TIW': (47.27, 122.58, 'Tacoma', 'WA\n'), 'TDO': (46.48, 122.8, 'Toledo', 'WA\n'), 'ALW': (46.1, 118.28, 'Walla Walla', 'WA\n'), 'EAT': (47.4, 120.2, 'Wenatchee', 'WA\n'), 'NUW': (48.35, 122.65, 'Whidbey Is', 'WA\n'), 'YKM': (46.57, 120.53, 'Yakima', 'WA\n'), 'BKW': (37.78, 81.12, 'Beckley', 'WV\n'), 'BLF': (37.3, 81.22, 'Bluefield', 'WV\n'), 'CRW': (38.37, 81.6, 'Charleston', 'WV\n'), 'CKB': (39.28, 80.23, 'Clarksburg', 'WV\n'), 'EKN': (38.88, 79.85, 'Elkins', 'WV\n'), 'HTS': (38.37, 82.55, 'Huntington', 'WV\n'), 'LWB': (37.87, 80.4, 'Lewisburg', 'WV\n'), 'MRB': (39.4, 77.98, 'Martinsburg', 'WV\n'), 'MGW': (39.65, 79.92, 'Morgantown', 'WV\n'), 'PKB': (39.35, 81.43, 'Parkersburg', 'WV\n'), 'HLG': (40.18, 80.65, 'Wheeling', 'WV\n'), 'SSU': (37.46, 80.2, 'White Sulph', 'WV\n'), 'ATW': (44.25, 88.52, 'Appleton', 'WI\n'), 'EAU': (44.87, 91.48, 'Eau



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Claire', 'WI\n'), 'GRB': (44.48, 88.13, 'Green Bay', 'WI\n'), 'JVL': (42.62, 89.03, 'Janesville', 'WI\n'), 'LSE': (43.87, 91.25, 'La Crosse', 'WI\n'), 'LNR': (43.2, 90.18, 'Lone Rock', 'WI\n'), 'MSN': (43.13, 89.33, 'Madison', 'WI\n'), 'MTW': (44.13, 87.67, 'Manitowac', 'WI\n'), 'MKE': (42.95, 87.9, 'Milwaukee', 'WI\n'), 'MWC': (43.12, 88.05, 'Milwaukee', 'WI\n'), 'CWA': (44.78, 89.67, 'Mosinee', 'WI\n'), 'EEW': (44.22, 88.53, 'Neenah', 'WI\n'), 'OSH': (44.0, 88.57, 'Oshkosh', 'WI\n'), 'RHI': (45.63, 89.45, 'Rhineland', 'WI\n'), 'RIE': (45.48, 91.72, 'Rice Lake', 'WI\n'), 'VOK': (43.93, 90.27, 'Volk Fld', 'WI\n'), 'AUW': (44.92, 89.62, 'Wausau', 'WI\n'), 'BPI': (42.57, 110.1, 'Big Piney', 'WY\n'), 'CPR': (42.92, 106.47, 'Casper', 'WY\n'), 'CYS': (41.15, 104.82, 'Cheyenne', 'WY\n'), 'COD': (44.52, 109.02, 'Cody', 'WY\n'), '4DG': (42.75, 105.38, 'Douglas', 'WY\n'), 'EVW': (41.33, 111.0, 'Evanston', 'WY\n'), 'GCC': (44.35, 105.53, 'Gillette', 'WY\n'), 'JAC': (43.6, 110.73, 'Jackson', 'WY\n'), 'LND': (42.82, 108.73, 'Lander', 'WY\n'), 'LAR': (41.32, 105.68, 'Laramie', 'WY\n'), '4MC': (44.35, 104.81, 'Moorcroft', 'WY\n'), 'RWL': (41.8, 107.2, 'Rawlins', 'WY\n'), 'RIW': (43.05, 108.45, 'Riverton', 'WY\n'), 'RKS': (41.6, 109.07, 'Rock Springs', 'WY\n'), 'SHR': (44.77, 106.97, 'Sheridan', 'WY\n'), 'WRL': (43.97, 107.97, 'Worland', 'WY\n'), 'P60': (44.55, 110.42, 'Yellowstone', 'WY')}\n(51.88, 176.65, 'Adak', 'AK\n')\n(38.85, 77.04, 'Washington/Natl', 'DC\n')\n(48.42, 119.53, 'Omak', 'WA\n')\n1694.54554995\n7295.50355678\n40M
```

Voorbeelden van ongeldige invoer

Geen

## Ontwerp

Met een complexe berekening wordt uitgerekend hoever de coördinaten van twee vliegvelden uit elkaar liggen. Hiermee kan ook een tussenstop worden berekend aan de hand van hoever een vliegtuig vliegen kan.

## Pseudocode

functie lees\_luchthavens

- open bestand

- lees regels

- lees de luchthavens

- teruggeven

functie afstand:

- moeilijke berekening

- geef afstand tussen vliegvelden

functie tussenlanding

- voor elk vliegveld

- controleer of het vliegveld bereikbaar is

- geef geldige tussenstop terug

## Test

Geen