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>> % Jeph Mari M. Daligdig BS ECE III
>> % ECE 106.1 Laboratory Line Coding
>> x = [1 0 1 1 0 1 1 1 0]
x =
    1    0    1    1    0    1    1    1    0
>> nx=size(x,2)
nx =
     9
>> sign=1
sign =
     1
>> i=1
i =
     1
>> while i<nx+1
t = i:0.001:i+1-0.001
if x(i)==1
unipolar_code=square(t*2*pi,100)
polar_code=square(t*2*pi,100)
bipolar_code=sign*square(t*2*pi,100)
sign=sign*-1
manchester_code=-square(t*2*pi,50)
else
unipolar_code=0
polar_code=-square(t*2*pi,100)
bipolar_code=0
manchester_code=square(t*2*pi,50)
end
subplot(4,1,1)
plot(t,unipolar_code)
ylabel('unipolar code')
hold on
grid on
axis([1 10 -2 2])
subplot(4,1,2)
plot(t,polar_code)
ylabel('polar code')
hold on
grid on
axis([1 10 -2 2])
subplot(4,1,3)
plot(t,bipolar_code)
ylabel('bipolar code')
hold on
grid on
axis([1 10 -2 2])
subplot(4,1,4)
plot(t,manchester_code)
ylabel('manchester code')
hold on
grid on
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axis([1 10 -2 2])
i=i+1
end
t =
    Columns 1 through 13
    1.0000    1.0010    1.0020    1.0030    1.0040    1.0050    1.0060    1.0070 ✓
1.0080    1.0090    1.0100    1.0110    1.0120
    Columns 14 through 26
    1.0130    1.0140    1.0150    1.0160    1.0170    1.0180    1.0190    1.0200 ✓
1.0210    1.0220    1.0230    1.0240    1.0250
    Columns 27 through 39
    1.0260    1.0270    1.0280    1.0290    1.0300    1.0310    1.0320    1.0330 ✓
1.0340    1.0350    1.0360    1.0370    1.0380
    Columns 40 through 52
    1.0390    1.0400    1.0410    1.0420    1.0430    1.0440    1.0450    1.0460 ✓
1.0470    1.0480    1.0490    1.0500    1.0510
    Columns 53 through 65
    1.0520    1.0530    1.0540    1.0550    1.0560    1.0570    1.0580    1.0590 ✓
1.0600    1.0610    1.0620    1.0630    1.0640
    Columns 66 through 78
    1.0650    1.0660    1.0670    1.0680    1.0690    1.0700    1.0710    1.0720 ✓
1.0730    1.0740    1.0750    1.0760    1.0770
    Columns 79 through 91
    1.0780    1.0790    1.0800    1.0810    1.0820    1.0830    1.0840    1.0850 ✓
1.0860    1.0870    1.0880    1.0890    1.0900
    Columns 92 through 104
    1.0910    1.0920    1.0930    1.0940    1.0950    1.0960    1.0970    1.0980 ✓
1.0990    1.1000    1.1010    1.1020    1.1030
    Columns 105 through 117
    1.1040    1.1050    1.1060    1.1070    1.1080    1.1090    1.1100    1.1110 ✓
1.1120    1.1130    1.1140    1.1150    1.1160
    Columns 118 through 130
    1.1170    1.1180    1.1190    1.1200    1.1210    1.1220    1.1230    1.1240 ✓
1.1250    1.1260    1.1270    1.1280    1.1290
    Columns 131 through 143
    1.1300    1.1310    1.1320    1.1330    1.1340    1.1350    1.1360    1.1370 ✓
1.1380    1.1390    1.1400    1.1410    1.1420
    Columns 144 through 156
    1.1430    1.1440    1.1450    1.1460    1.1470    1.1480    1.1490    1.1500 ✓
1.1510    1.1520    1.1530    1.1540    1.1550
    Columns 157 through 169
    1.1560    1.1570    1.1580    1.1590    1.1600    1.1610    1.1620    1.1630 ✓
1.1640    1.1650    1.1660    1.1670    1.1680
    Columns 170 through 182
    1.1690    1.1700    1.1710    1.1720    1.1730    1.1740    1.1750    1.1760 ✓
1.1770    1.1780    1.1790    1.1800    1.1810
    Columns 183 through 195
    1.1820    1.1830    1.1840    1.1850    1.1860    1.1870    1.1880    1.1890 ✓
1.1900    1.1910    1.1920    1.1930    1.1940
    Columns 196 through 208
    1.1950    1.1960    1.1970    1.1980    1.1990    1.2000    1.2010    1.2020 ✓

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1.2030    1.2040    1.2050    1.2060    1.2070
Columns 209 through 221
    1.2080    1.2090    1.2100    1.2110    1.2120    1.2130    1.2140    1.2150 ✓
1.2160    1.2170    1.2180    1.2190    1.2200
Columns 222 through 234
    1.2210    1.2220    1.2230    1.2240    1.2250    1.2260    1.2270    1.2280 ✓
1.2290    1.2300    1.2310    1.2320    1.2330
Columns 235 through 247
    1.2340    1.2350    1.2360    1.2370    1.2380    1.2390    1.2400    1.2410 ✓
1.2420    1.2430    1.2440    1.2450    1.2460
Columns 248 through 260
    1.2470    1.2480    1.2490    1.2500    1.2510    1.2520    1.2530    1.2540 ✓
1.2550    1.2560    1.2570    1.2580    1.2590
Columns 261 through 273
    1.2600    1.2610    1.2620    1.2630    1.2640    1.2650    1.2660    1.2670 ✓
1.2680    1.2690    1.2700    1.2710    1.2720
Columns 274 through 286
    1.2730    1.2740    1.2750    1.2760    1.2770    1.2780    1.2790    1.2800 ✓
1.2810    1.2820    1.2830    1.2840    1.2850
Columns 287 through 299
    1.2860    1.2870    1.2880    1.2890    1.2900    1.2910    1.2920    1.2930 ✓
1.2940    1.2950    1.2960    1.2970    1.2980
Columns 300 through 312
    1.2990    1.3000    1.3010    1.3020    1.3030    1.3040    1.3050    1.3060 ✓
1.3070    1.3080    1.3090    1.3100    1.3110
Columns 313 through 325
    1.3120    1.3130    1.3140    1.3150    1.3160    1.3170    1.3180    1.3190 ✓
1.3200    1.3210    1.3220    1.3230    1.3240
Columns 326 through 338
    1.3250    1.3260    1.3270    1.3280    1.3290    1.3300    1.3310    1.3320 ✓
1.3330    1.3340    1.3350    1.3360    1.3370
Columns 339 through 351
    1.3380    1.3390    1.3400    1.3410    1.3420    1.3430    1.3440    1.3450 ✓
1.3460    1.3470    1.3480    1.3490    1.3500
Columns 352 through 364
    1.3510    1.3520    1.3530    1.3540    1.3550    1.3560    1.3570    1.3580 ✓
1.3590    1.3600    1.3610    1.3620    1.3630
Columns 365 through 377
    1.3640    1.3650    1.3660    1.3670    1.3680    1.3690    1.3700    1.3710 ✓
1.3720    1.3730    1.3740    1.3750    1.3760
Columns 378 through 390
    1.3770    1.3780    1.3790    1.3800    1.3810    1.3820    1.3830    1.3840 ✓
1.3850    1.3860    1.3870    1.3880    1.3890
Columns 391 through 403
    1.3900    1.3910    1.3920    1.3930    1.3940    1.3950    1.3960    1.3970 ✓
1.3980    1.3990    1.4000    1.4010    1.4020
Columns 404 through 416
    1.4030    1.4040    1.4050    1.4060    1.4070    1.4080    1.4090    1.4100 ✓
1.4110    1.4120    1.4130    1.4140    1.4150
Columns 417 through 429
    1.4160    1.4170    1.4180    1.4190    1.4200    1.4210    1.4220    1.4230 ✓
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1.4240	1.4250	1.4260	1.4270	1.4280				
Columns 430 through 442								
1.4290	1.4300	1.4310	1.4320	1.4330	1.4340	1.4350	1.4360	✓
1.4370	1.4380	1.4390	1.4400	1.4410				
Columns 443 through 455								
1.4420	1.4430	1.4440	1.4450	1.4460	1.4470	1.4480	1.4490	✓
1.4500	1.4510	1.4520	1.4530	1.4540				
Columns 456 through 468								
1.4550	1.4560	1.4570	1.4580	1.4590	1.4600	1.4610	1.4620	✓
1.4630	1.4640	1.4650	1.4660	1.4670				
Columns 469 through 481								
1.4680	1.4690	1.4700	1.4710	1.4720	1.4730	1.4740	1.4750	✓
1.4760	1.4770	1.4780	1.4790	1.4800				
Columns 482 through 494								
1.4810	1.4820	1.4830	1.4840	1.4850	1.4860	1.4870	1.4880	✓
1.4890	1.4900	1.4910	1.4920	1.4930				
Columns 495 through 507								
1.4940	1.4950	1.4960	1.4970	1.4980	1.4990	1.5000	1.5010	✓
1.5020	1.5030	1.5040	1.5050	1.5060				
Columns 508 through 520								
1.5070	1.5080	1.5090	1.5100	1.5110	1.5120	1.5130	1.5140	✓
1.5150	1.5160	1.5170	1.5180	1.5190				
Columns 521 through 533								
1.5200	1.5210	1.5220	1.5230	1.5240	1.5250	1.5260	1.5270	✓
1.5280	1.5290	1.5300	1.5310	1.5320				
Columns 534 through 546								
1.5330	1.5340	1.5350	1.5360	1.5370	1.5380	1.5390	1.5400	✓
1.5410	1.5420	1.5430	1.5440	1.5450				
Columns 547 through 559								
1.5460	1.5470	1.5480	1.5490	1.5500	1.5510	1.5520	1.5530	✓
1.5540	1.5550	1.5560	1.5570	1.5580				
Columns 560 through 572								
1.5590	1.5600	1.5610	1.5620	1.5630	1.5640	1.5650	1.5660	✓
1.5670	1.5680	1.5690	1.5700	1.5710				
Columns 573 through 585								
1.5720	1.5730	1.5740	1.5750	1.5760	1.5770	1.5780	1.5790	✓
1.5800	1.5810	1.5820	1.5830	1.5840				
Columns 586 through 598								
1.5850	1.5860	1.5870	1.5880	1.5890	1.5900	1.5910	1.5920	✓
1.5930	1.5940	1.5950	1.5960	1.5970				
Columns 599 through 611								
1.5980	1.5990	1.6000	1.6010	1.6020	1.6030	1.6040	1.6050	✓
1.6060	1.6070	1.6080	1.6090	1.6100				
Columns 612 through 624								
1.6110	1.6120	1.6130	1.6140	1.6150	1.6160	1.6170	1.6180	✓
1.6190	1.6200	1.6210	1.6220	1.6230				
Columns 625 through 637								
1.6240	1.6250	1.6260	1.6270	1.6280	1.6290	1.6300	1.6310	✓
1.6320	1.6330	1.6340	1.6350	1.6360				
Columns 638 through 650								
1.6370	1.6380	1.6390	1.6400	1.6410	1.6420	1.6430	1.6440	✓

1.6450	1.6460	1.6470	1.6480	1.6490				
Columns 651 through 663								
1.6500	1.6510	1.6520	1.6530	1.6540	1.6550	1.6560	1.6570	✓
1.6580	1.6590	1.6600	1.6610	1.6620				
Columns 664 through 676								
1.6630	1.6640	1.6650	1.6660	1.6670	1.6680	1.6690	1.6700	✓
1.6710	1.6720	1.6730	1.6740	1.6750				
Columns 677 through 689								
1.6760	1.6770	1.6780	1.6790	1.6800	1.6810	1.6820	1.6830	✓
1.6840	1.6850	1.6860	1.6870	1.6880				
Columns 690 through 702								
1.6890	1.6900	1.6910	1.6920	1.6930	1.6940	1.6950	1.6960	✓
1.6970	1.6980	1.6990	1.7000	1.7010				
Columns 703 through 715								
1.7020	1.7030	1.7040	1.7050	1.7060	1.7070	1.7080	1.7090	✓
1.7100	1.7110	1.7120	1.7130	1.7140				
Columns 716 through 728								
1.7150	1.7160	1.7170	1.7180	1.7190	1.7200	1.7210	1.7220	✓
1.7230	1.7240	1.7250	1.7260	1.7270				
Columns 729 through 741								
1.7280	1.7290	1.7300	1.7310	1.7320	1.7330	1.7340	1.7350	✓
1.7360	1.7370	1.7380	1.7390	1.7400				
Columns 742 through 754								
1.7410	1.7420	1.7430	1.7440	1.7450	1.7460	1.7470	1.7480	✓
1.7490	1.7500	1.7510	1.7520	1.7530				
Columns 755 through 767								
1.7540	1.7550	1.7560	1.7570	1.7580	1.7590	1.7600	1.7610	✓
1.7620	1.7630	1.7640	1.7650	1.7660				
Columns 768 through 780								
1.7670	1.7680	1.7690	1.7700	1.7710	1.7720	1.7730	1.7740	✓
1.7750	1.7760	1.7770	1.7780	1.7790				
Columns 781 through 793								
1.7800	1.7810	1.7820	1.7830	1.7840	1.7850	1.7860	1.7870	✓
1.7880	1.7890	1.7900	1.7910	1.7920				
Columns 794 through 806								
1.7930	1.7940	1.7950	1.7960	1.7970	1.7980	1.7990	1.8000	✓
1.8010	1.8020	1.8030	1.8040	1.8050				
Columns 807 through 819								
1.8060	1.8070	1.8080	1.8090	1.8100	1.8110	1.8120	1.8130	✓
1.8140	1.8150	1.8160	1.8170	1.8180				
Columns 820 through 832								
1.8190	1.8200	1.8210	1.8220	1.8230	1.8240	1.8250	1.8260	✓
1.8270	1.8280	1.8290	1.8300	1.8310				
Columns 833 through 845								
1.8320	1.8330	1.8340	1.8350	1.8360	1.8370	1.8380	1.8390	✓
1.8400	1.8410	1.8420	1.8430	1.8440				
Columns 846 through 858								
1.8450	1.8460	1.8470	1.8480	1.8490	1.8500	1.8510	1.8520	✓
1.8530	1.8540	1.8550	1.8560	1.8570				
Columns 859 through 871								
1.8580	1.8590	1.8600	1.8610	1.8620	1.8630	1.8640	1.8650	✓

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1.8660    1.8670    1.8680    1.8690    1.8700
Columns 872 through 884
    1.8710    1.8720    1.8730    1.8740    1.8750    1.8760    1.8770    1.8780 ✓
1.8790    1.8800    1.8810    1.8820    1.8830
Columns 885 through 897
    1.8840    1.8850    1.8860    1.8870    1.8880    1.8890    1.8900    1.8910 ✓
1.8920    1.8930    1.8940    1.8950    1.8960
Columns 898 through 910
    1.8970    1.8980    1.8990    1.9000    1.9010    1.9020    1.9030    1.9040 ✓
1.9050    1.9060    1.9070    1.9080    1.9090
Columns 911 through 923
    1.9100    1.9110    1.9120    1.9130    1.9140    1.9150    1.9160    1.9170 ✓
1.9180    1.9190    1.9200    1.9210    1.9220
Columns 924 through 936
    1.9230    1.9240    1.9250    1.9260    1.9270    1.9280    1.9290    1.9300 ✓
1.9310    1.9320    1.9330    1.9340    1.9350
Columns 937 through 949
    1.9360    1.9370    1.9380    1.9390    1.9400    1.9410    1.9420    1.9430 ✓
1.9440    1.9450    1.9460    1.9470    1.9480
Columns 950 through 962
    1.9490    1.9500    1.9510    1.9520    1.9530    1.9540    1.9550    1.9560 ✓
1.9570    1.9580    1.9590    1.9600    1.9610
Columns 963 through 975
    1.9620    1.9630    1.9640    1.9650    1.9660    1.9670    1.9680    1.9690 ✓
1.9700    1.9710    1.9720    1.9730    1.9740
Columns 976 through 988
    1.9750    1.9760    1.9770    1.9780    1.9790    1.9800    1.9810    1.9820 ✓
1.9830    1.9840    1.9850    1.9860    1.9870
Columns 989 through 1000
    1.9880    1.9890    1.9900    1.9910    1.9920    1.9930    1.9940    1.9950 ✓
1.9960    1.9970    1.9980    1.9990
unipolar_code =
Columns 1 through 23
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1
Columns 24 through 46
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 47 through 69
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 70 through 92
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 93 through 115
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 116 through 138
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 139 through 161

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 93 through 115																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 116 through 138																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 139 through 161																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 162 through 184																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 185 through 207																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 208 through 230																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 231 through 253																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 254 through 276																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 277 through 299																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 300 through 322																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 323 through 345																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 346 through 368																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 369 through 391																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 392 through 414																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 415 through 437																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 438 through 460																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1								
	Columns 461 through 483																

[illegible]

[illegible]

[illegible]

[illegible]


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i =
    2
t =
Columns 1 through 13
    2.0000    2.0010    2.0020    2.0030    2.0040    2.0050    2.0060    2.0070 ✓
2.0080    2.0090    2.0100    2.0110    2.0120
Columns 14 through 26
    2.0130    2.0140    2.0150    2.0160    2.0170    2.0180    2.0190    2.0200 ✓
2.0210    2.0220    2.0230    2.0240    2.0250
Columns 27 through 39
    2.0260    2.0270    2.0280    2.0290    2.0300    2.0310    2.0320    2.0330 ✓
2.0340    2.0350    2.0360    2.0370    2.0380
Columns 40 through 52
    2.0390    2.0400    2.0410    2.0420    2.0430    2.0440    2.0450    2.0460 ✓
2.0470    2.0480    2.0490    2.0500    2.0510
Columns 53 through 65
    2.0520    2.0530    2.0540    2.0550    2.0560    2.0570    2.0580    2.0590 ✓
2.0600    2.0610    2.0620    2.0630    2.0640
Columns 66 through 78
    2.0650    2.0660    2.0670    2.0680    2.0690    2.0700    2.0710    2.0720 ✓
2.0730    2.0740    2.0750    2.0760    2.0770
Columns 79 through 91
    2.0780    2.0790    2.0800    2.0810    2.0820    2.0830    2.0840    2.0850 ✓
2.0860    2.0870    2.0880    2.0890    2.0900
Columns 92 through 104
    2.0910    2.0920    2.0930    2.0940    2.0950    2.0960    2.0970    2.0980 ✓
2.0990    2.1000    2.1010    2.1020    2.1030
Columns 105 through 117
    2.1040    2.1050    2.1060    2.1070    2.1080    2.1090    2.1100    2.1110 ✓
2.1120    2.1130    2.1140    2.1150    2.1160
Columns 118 through 130
    2.1170    2.1180    2.1190    2.1200    2.1210    2.1220    2.1230    2.1240 ✓
2.1250    2.1260    2.1270    2.1280    2.1290
Columns 131 through 143
    2.1300    2.1310    2.1320    2.1330    2.1340    2.1350    2.1360    2.1370 ✓
2.1380    2.1390    2.1400    2.1410    2.1420
Columns 144 through 156
    2.1430    2.1440    2.1450    2.1460    2.1470    2.1480    2.1490    2.1500 ✓
2.1510    2.1520    2.1530    2.1540    2.1550
Columns 157 through 169
    2.1560    2.1570    2.1580    2.1590    2.1600    2.1610    2.1620    2.1630 ✓
2.1640    2.1650    2.1660    2.1670    2.1680
Columns 170 through 182
    2.1690    2.1700    2.1710    2.1720    2.1730    2.1740    2.1750    2.1760 ✓
2.1770    2.1780    2.1790    2.1800    2.1810
Columns 183 through 195
    2.1820    2.1830    2.1840    2.1850    2.1860    2.1870    2.1880    2.1890 ✓
2.1900    2.1910    2.1920    2.1930    2.1940
Columns 196 through 208
    2.1950    2.1960    2.1970    2.1980    2.1990    2.2000    2.2010    2.2020 ✓
2.2030    2.2040    2.2050    2.2060    2.2070

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Columns 209 through 221
  2.2080    2.2090    2.2100    2.2110    2.2120    2.2130    2.2140    2.2150 ✓
2.2160    2.2170    2.2180    2.2190    2.2200
Columns 222 through 234
  2.2210    2.2220    2.2230    2.2240    2.2250    2.2260    2.2270    2.2280 ✓
2.2290    2.2300    2.2310    2.2320    2.2330
Columns 235 through 247
  2.2340    2.2350    2.2360    2.2370    2.2380    2.2390    2.2400    2.2410 ✓
2.2420    2.2430    2.2440    2.2450    2.2460
Columns 248 through 260
  2.2470    2.2480    2.2490    2.2500    2.2510    2.2520    2.2530    2.2540 ✓
2.2550    2.2560    2.2570    2.2580    2.2590
Columns 261 through 273
  2.2600    2.2610    2.2620    2.2630    2.2640    2.2650    2.2660    2.2670 ✓
2.2680    2.2690    2.2700    2.2710    2.2720
Columns 274 through 286
  2.2730    2.2740    2.2750    2.2760    2.2770    2.2780    2.2790    2.2800 ✓
2.2810    2.2820    2.2830    2.2840    2.2850
Columns 287 through 299
  2.2860    2.2870    2.2880    2.2890    2.2900    2.2910    2.2920    2.2930 ✓
2.2940    2.2950    2.2960    2.2970    2.2980
Columns 300 through 312
  2.2990    2.3000    2.3010    2.3020    2.3030    2.3040    2.3050    2.3060 ✓
2.3070    2.3080    2.3090    2.3100    2.3110
Columns 313 through 325
  2.3120    2.3130    2.3140    2.3150    2.3160    2.3170    2.3180    2.3190 ✓
2.3200    2.3210    2.3220    2.3230    2.3240
Columns 326 through 338
  2.3250    2.3260    2.3270    2.3280    2.3290    2.3300    2.3310    2.3320 ✓
2.3330    2.3340    2.3350    2.3360    2.3370
Columns 339 through 351
  2.3380    2.3390    2.3400    2.3410    2.3420    2.3430    2.3440    2.3450 ✓
2.3460    2.3470    2.3480    2.3490    2.3500
Columns 352 through 364
  2.3510    2.3520    2.3530    2.3540    2.3550    2.3560    2.3570    2.3580 ✓
2.3590    2.3600    2.3610    2.3620    2.3630
Columns 365 through 377
  2.3640    2.3650    2.3660    2.3670    2.3680    2.3690    2.3700    2.3710 ✓
2.3720    2.3730    2.3740    2.3750    2.3760
Columns 378 through 390
  2.3770    2.3780    2.3790    2.3800    2.3810    2.3820    2.3830    2.3840 ✓
2.3850    2.3860    2.3870    2.3880    2.3890
Columns 391 through 403
  2.3900    2.3910    2.3920    2.3930    2.3940    2.3950    2.3960    2.3970 ✓
2.3980    2.3990    2.4000    2.4010    2.4020
Columns 404 through 416
  2.4030    2.4040    2.4050    2.4060    2.4070    2.4080    2.4090    2.4100 ✓
2.4110    2.4120    2.4130    2.4140    2.4150
Columns 417 through 429
  2.4160    2.4170    2.4180    2.4190    2.4200    2.4210    2.4220    2.4230 ✓
2.4240    2.4250    2.4260    2.4270    2.4280
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Columns 430 through 442
  2.4290    2.4300    2.4310    2.4320    2.4330    2.4340    2.4350    2.4360 ✓
2.4370    2.4380    2.4390    2.4400    2.4410
Columns 443 through 455
  2.4420    2.4430    2.4440    2.4450    2.4460    2.4470    2.4480    2.4490 ✓
2.4500    2.4510    2.4520    2.4530    2.4540
Columns 456 through 468
  2.4550    2.4560    2.4570    2.4580    2.4590    2.4600    2.4610    2.4620 ✓
2.4630    2.4640    2.4650    2.4660    2.4670
Columns 469 through 481
  2.4680    2.4690    2.4700    2.4710    2.4720    2.4730    2.4740    2.4750 ✓
2.4760    2.4770    2.4780    2.4790    2.4800
Columns 482 through 494
  2.4810    2.4820    2.4830    2.4840    2.4850    2.4860    2.4870    2.4880 ✓
2.4890    2.4900    2.4910    2.4920    2.4930
Columns 495 through 507
  2.4940    2.4950    2.4960    2.4970    2.4980    2.4990    2.5000    2.5010 ✓
2.5020    2.5030    2.5040    2.5050    2.5060
Columns 508 through 520
  2.5070    2.5080    2.5090    2.5100    2.5110    2.5120    2.5130    2.5140 ✓
2.5150    2.5160    2.5170    2.5180    2.5190
Columns 521 through 533
  2.5200    2.5210    2.5220    2.5230    2.5240    2.5250    2.5260    2.5270 ✓
2.5280    2.5290    2.5300    2.5310    2.5320
Columns 534 through 546
  2.5330    2.5340    2.5350    2.5360    2.5370    2.5380    2.5390    2.5400 ✓
2.5410    2.5420    2.5430    2.5440    2.5450
Columns 547 through 559
  2.5460    2.5470    2.5480    2.5490    2.5500    2.5510    2.5520    2.5530 ✓
2.5540    2.5550    2.5560    2.5570    2.5580
Columns 560 through 572
  2.5590    2.5600    2.5610    2.5620    2.5630    2.5640    2.5650    2.5660 ✓
2.5670    2.5680    2.5690    2.5700    2.5710
Columns 573 through 585
  2.5720    2.5730    2.5740    2.5750    2.5760    2.5770    2.5780    2.5790 ✓
2.5800    2.5810    2.5820    2.5830    2.5840
Columns 586 through 598
  2.5850    2.5860    2.5870    2.5880    2.5890    2.5900    2.5910    2.5920 ✓
2.5930    2.5940    2.5950    2.5960    2.5970
Columns 599 through 611
  2.5980    2.5990    2.6000    2.6010    2.6020    2.6030    2.6040    2.6050 ✓
2.6060    2.6070    2.6080    2.6090    2.6100
Columns 612 through 624
  2.6110    2.6120    2.6130    2.6140    2.6150    2.6160    2.6170    2.6180 ✓
2.6190    2.6200    2.6210    2.6220    2.6230
Columns 625 through 637
  2.6240    2.6250    2.6260    2.6270    2.6280    2.6290    2.6300    2.6310 ✓
2.6320    2.6330    2.6340    2.6350    2.6360
Columns 638 through 650
  2.6370    2.6380    2.6390    2.6400    2.6410    2.6420    2.6430    2.6440 ✓
2.6450    2.6460    2.6470    2.6480    2.6490
```

```
Columns 651 through 663
    2.6500    2.6510    2.6520    2.6530    2.6540    2.6550    2.6560    2.6570 ✓
2.6580    2.6590    2.6600    2.6610    2.6620
Columns 664 through 676
    2.6630    2.6640    2.6650    2.6660    2.6670    2.6680    2.6690    2.6700 ✓
2.6710    2.6720    2.6730    2.6740    2.6750
Columns 677 through 689
    2.6760    2.6770    2.6780    2.6790    2.6800    2.6810    2.6820    2.6830 ✓
2.6840    2.6850    2.6860    2.6870    2.6880
Columns 690 through 702
    2.6890    2.6900    2.6910    2.6920    2.6930    2.6940    2.6950    2.6960 ✓
2.6970    2.6980    2.6990    2.7000    2.7010
Columns 703 through 715
    2.7020    2.7030    2.7040    2.7050    2.7060    2.7070    2.7080    2.7090 ✓
2.7100    2.7110    2.7120    2.7130    2.7140
Columns 716 through 728
    2.7150    2.7160    2.7170    2.7180    2.7190    2.7200    2.7210    2.7220 ✓
2.7230    2.7240    2.7250    2.7260    2.7270
Columns 729 through 741
    2.7280    2.7290    2.7300    2.7310    2.7320    2.7330    2.7340    2.7350 ✓
2.7360    2.7370    2.7380    2.7390    2.7400
Columns 742 through 754
    2.7410    2.7420    2.7430    2.7440    2.7450    2.7460    2.7470    2.7480 ✓
2.7490    2.7500    2.7510    2.7520    2.7530
Columns 755 through 767
    2.7540    2.7550    2.7560    2.7570    2.7580    2.7590    2.7600    2.7610 ✓
2.7620    2.7630    2.7640    2.7650    2.7660
Columns 768 through 780
    2.7670    2.7680    2.7690    2.7700    2.7710    2.7720    2.7730    2.7740 ✓
2.7750    2.7760    2.7770    2.7780    2.7790
Columns 781 through 793
    2.7800    2.7810    2.7820    2.7830    2.7840    2.7850    2.7860    2.7870 ✓
2.7880    2.7890    2.7900    2.7910    2.7920
Columns 794 through 806
    2.7930    2.7940    2.7950    2.7960    2.7970    2.7980    2.7990    2.8000 ✓
2.8010    2.8020    2.8030    2.8040    2.8050
Columns 807 through 819
    2.8060    2.8070    2.8080    2.8090    2.8100    2.8110    2.8120    2.8130 ✓
2.8140    2.8150    2.8160    2.8170    2.8180
Columns 820 through 832
    2.8190    2.8200    2.8210    2.8220    2.8230    2.8240    2.8250    2.8260 ✓
2.8270    2.8280    2.8290    2.8300    2.8310
Columns 833 through 845
    2.8320    2.8330    2.8340    2.8350    2.8360    2.8370    2.8380    2.8390 ✓
2.8400    2.8410    2.8420    2.8430    2.8440
Columns 846 through 858
    2.8450    2.8460    2.8470    2.8480    2.8490    2.8500    2.8510    2.8520 ✓
2.8530    2.8540    2.8550    2.8560    2.8570
Columns 859 through 871
    2.8580    2.8590    2.8600    2.8610    2.8620    2.8630    2.8640    2.8650 ✓
2.8660    2.8670    2.8680    2.8690    2.8700
```

```
Columns 872 through 884
 2.8710    2.8720    2.8730    2.8740    2.8750    2.8760    2.8770    2.8780 ✓
2.8790    2.8800    2.8810    2.8820    2.8830
Columns 885 through 897
 2.8840    2.8850    2.8860    2.8870    2.8880    2.8890    2.8900    2.8910 ✓
2.8920    2.8930    2.8940    2.8950    2.8960
Columns 898 through 910
 2.8970    2.8980    2.8990    2.9000    2.9010    2.9020    2.9030    2.9040 ✓
2.9050    2.9060    2.9070    2.9080    2.9090
Columns 911 through 923
 2.9100    2.9110    2.9120    2.9130    2.9140    2.9150    2.9160    2.9170 ✓
2.9180    2.9190    2.9200    2.9210    2.9220
Columns 924 through 936
 2.9230    2.9240    2.9250    2.9260    2.9270    2.9280    2.9290    2.9300 ✓
2.9310    2.9320    2.9330    2.9340    2.9350
Columns 937 through 949
 2.9360    2.9370    2.9380    2.9390    2.9400    2.9410    2.9420    2.9430 ✓
2.9440    2.9450    2.9460    2.9470    2.9480
Columns 950 through 962
 2.9490    2.9500    2.9510    2.9520    2.9530    2.9540    2.9550    2.9560 ✓
2.9570    2.9580    2.9590    2.9600    2.9610
Columns 963 through 975
 2.9620    2.9630    2.9640    2.9650    2.9660    2.9670    2.9680    2.9690 ✓
2.9700    2.9710    2.9720    2.9730    2.9740
Columns 976 through 988
 2.9750    2.9760    2.9770    2.9780    2.9790    2.9800    2.9810    2.9820 ✓
2.9830    2.9840    2.9850    2.9860    2.9870
Columns 989 through 1000
 2.9880    2.9890    2.9900    2.9910    2.9920    2.9930    2.9940    2.9950 ✓
2.9960    2.9970    2.9980    2.9990
unipolar_code =
    0
polar_code =
Columns 1 through 23
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 24 through 46
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 47 through 69
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 70 through 92
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 93 through 115
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 116 through 138
 -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
```

Columns 139 through 161	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 162 through 184	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 185 through 207	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 208 through 230	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 231 through 253	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 254 through 276	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 277 through 299	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 300 through 322	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 323 through 345	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 346 through 368	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 369 through 391	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 392 through 414	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 415 through 437	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 438 through 460	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 461 through 483	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 484 through 506	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 507 through 529	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						

Columns 530 through 552	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 553 through 575	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 576 through 598	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 599 through 621	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 622 through 644	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 645 through 667	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 668 through 690	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 691 through 713	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 714 through 736	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 737 through 759	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 760 through 782	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 783 through 805	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 806 through 828	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 829 through 851	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 852 through 874	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 875 through 897	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 898 through 920	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						

```

Columns 921 through 943
  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1 ✓
-1  -1  -1  -1  -1  -1  -1  -1  -1
Columns 944 through 966
  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1 ✓
-1  -1  -1  -1  -1  -1  -1  -1  -1
Columns 967 through 989
  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1 ✓
-1  -1  -1  -1  -1  -1  -1  -1  -1
Columns 990 through 1000
  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1  -1
bipolar_code =
    0
manchester_code =
Columns 1 through 23
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1
Columns 24 through 46
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 47 through 69
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 70 through 92
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 93 through 115
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 116 through 138
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 139 through 161
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 162 through 184
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 185 through 207
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 208 through 230
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 231 through 253
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 254 through 276
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 277 through 299

```


	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 300 through 322														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 323 through 345														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 346 through 368														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 369 through 391														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 392 through 414														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 415 through 437														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 438 through 460														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 461 through 483														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1	1						
	Columns 484 through 506														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	-1	-1	-1	-1	-1	-1	-1						
	Columns 507 through 529														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 530 through 552														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 553 through 575														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 576 through 598														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 599 through 621														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 622 through 644														
	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1↙
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
	Columns 645 through 667														

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 691 through 713
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 714 through 736
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 737 through 759
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 760 through 782
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 783 through 805
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 806 through 828
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 829 through 851
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 852 through 874
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 875 through 897
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 898 through 920
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 921 through 943
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 944 through 966
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 967 through 989
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 990 through 1000
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
i =
3
t =
Columns 1 through 13
3.0000 3.0010 3.0020 3.0030 3.0040 3.0050 3.0060 3.0070 ✓
3.0080 3.0090 3.0100 3.0110 3.0120
Columns 14 through 26
3.0130 3.0140 3.0150 3.0160 3.0170 3.0180 3.0190 3.0200 ✓
```

```
3.0210    3.0220    3.0230    3.0240    3.0250
Columns 27 through 39
    3.0260    3.0270    3.0280    3.0290    3.0300    3.0310    3.0320    3.0330 ✓
3.0340    3.0350    3.0360    3.0370    3.0380
Columns 40 through 52
    3.0390    3.0400    3.0410    3.0420    3.0430    3.0440    3.0450    3.0460 ✓
3.0470    3.0480    3.0490    3.0500    3.0510
Columns 53 through 65
    3.0520    3.0530    3.0540    3.0550    3.0560    3.0570    3.0580    3.0590 ✓
3.0600    3.0610    3.0620    3.0630    3.0640
Columns 66 through 78
    3.0650    3.0660    3.0670    3.0680    3.0690    3.0700    3.0710    3.0720 ✓
3.0730    3.0740    3.0750    3.0760    3.0770
Columns 79 through 91
    3.0780    3.0790    3.0800    3.0810    3.0820    3.0830    3.0840    3.0850 ✓
3.0860    3.0870    3.0880    3.0890    3.0900
Columns 92 through 104
    3.0910    3.0920    3.0930    3.0940    3.0950    3.0960    3.0970    3.0980 ✓
3.0990    3.1000    3.1010    3.1020    3.1030
Columns 105 through 117
    3.1040    3.1050    3.1060    3.1070    3.1080    3.1090    3.1100    3.1110 ✓
3.1120    3.1130    3.1140    3.1150    3.1160
Columns 118 through 130
    3.1170    3.1180    3.1190    3.1200    3.1210    3.1220    3.1230    3.1240 ✓
3.1250    3.1260    3.1270    3.1280    3.1290
Columns 131 through 143
    3.1300    3.1310    3.1320    3.1330    3.1340    3.1350    3.1360    3.1370 ✓
3.1380    3.1390    3.1400    3.1410    3.1420
Columns 144 through 156
    3.1430    3.1440    3.1450    3.1460    3.1470    3.1480    3.1490    3.1500 ✓
3.1510    3.1520    3.1530    3.1540    3.1550
Columns 157 through 169
    3.1560    3.1570    3.1580    3.1590    3.1600    3.1610    3.1620    3.1630 ✓
3.1640    3.1650    3.1660    3.1670    3.1680
Columns 170 through 182
    3.1690    3.1700    3.1710    3.1720    3.1730    3.1740    3.1750    3.1760 ✓
3.1770    3.1780    3.1790    3.1800    3.1810
Columns 183 through 195
    3.1820    3.1830    3.1840    3.1850    3.1860    3.1870    3.1880    3.1890 ✓
3.1900    3.1910    3.1920    3.1930    3.1940
Columns 196 through 208
    3.1950    3.1960    3.1970    3.1980    3.1990    3.2000    3.2010    3.2020 ✓
3.2030    3.2040    3.2050    3.2060    3.2070
Columns 209 through 221
    3.2080    3.2090    3.2100    3.2110    3.2120    3.2130    3.2140    3.2150 ✓
3.2160    3.2170    3.2180    3.2190    3.2200
Columns 222 through 234
    3.2210    3.2220    3.2230    3.2240    3.2250    3.2260    3.2270    3.2280 ✓
3.2290    3.2300    3.2310    3.2320    3.2330
Columns 235 through 247
    3.2340    3.2350    3.2360    3.2370    3.2380    3.2390    3.2400    3.2410 ✓
```

```
3.2420    3.2430    3.2440    3.2450    3.2460
Columns 248 through 260
    3.2470    3.2480    3.2490    3.2500    3.2510    3.2520    3.2530    3.2540 ✓
3.2550    3.2560    3.2570    3.2580    3.2590
Columns 261 through 273
    3.2600    3.2610    3.2620    3.2630    3.2640    3.2650    3.2660    3.2670 ✓
3.2680    3.2690    3.2700    3.2710    3.2720
Columns 274 through 286
    3.2730    3.2740    3.2750    3.2760    3.2770    3.2780    3.2790    3.2800 ✓
3.2810    3.2820    3.2830    3.2840    3.2850
Columns 287 through 299
    3.2860    3.2870    3.2880    3.2890    3.2900    3.2910    3.2920    3.2930 ✓
3.2940    3.2950    3.2960    3.2970    3.2980
Columns 300 through 312
    3.2990    3.3000    3.3010    3.3020    3.3030    3.3040    3.3050    3.3060 ✓
3.3070    3.3080    3.3090    3.3100    3.3110
Columns 313 through 325
    3.3120    3.3130    3.3140    3.3150    3.3160    3.3170    3.3180    3.3190 ✓
3.3200    3.3210    3.3220    3.3230    3.3240
Columns 326 through 338
    3.3250    3.3260    3.3270    3.3280    3.3290    3.3300    3.3310    3.3320 ✓
3.3330    3.3340    3.3350    3.3360    3.3370
Columns 339 through 351
    3.3380    3.3390    3.3400    3.3410    3.3420    3.3430    3.3440    3.3450 ✓
3.3460    3.3470    3.3480    3.3490    3.3500
Columns 352 through 364
    3.3510    3.3520    3.3530    3.3540    3.3550    3.3560    3.3570    3.3580 ✓
3.3590    3.3600    3.3610    3.3620    3.3630
Columns 365 through 377
    3.3640    3.3650    3.3660    3.3670    3.3680    3.3690    3.3700    3.3710 ✓
3.3720    3.3730    3.3740    3.3750    3.3760
Columns 378 through 390
    3.3770    3.3780    3.3790    3.3800    3.3810    3.3820    3.3830    3.3840 ✓
3.3850    3.3860    3.3870    3.3880    3.3890
Columns 391 through 403
    3.3900    3.3910    3.3920    3.3930    3.3940    3.3950    3.3960    3.3970 ✓
3.3980    3.3990    3.4000    3.4010    3.4020
Columns 404 through 416
    3.4030    3.4040    3.4050    3.4060    3.4070    3.4080    3.4090    3.4100 ✓
3.4110    3.4120    3.4130    3.4140    3.4150
Columns 417 through 429
    3.4160    3.4170    3.4180    3.4190    3.4200    3.4210    3.4220    3.4230 ✓
3.4240    3.4250    3.4260    3.4270    3.4280
Columns 430 through 442
    3.4290    3.4300    3.4310    3.4320    3.4330    3.4340    3.4350    3.4360 ✓
3.4370    3.4380    3.4390    3.4400    3.4410
Columns 443 through 455
    3.4420    3.4430    3.4440    3.4450    3.4460    3.4470    3.4480    3.4490 ✓
3.4500    3.4510    3.4520    3.4530    3.4540
Columns 456 through 468
    3.4550    3.4560    3.4570    3.4580    3.4590    3.4600    3.4610    3.4620 ✓
```

```
3.4630    3.4640    3.4650    3.4660    3.4670
Columns 469 through 481
    3.4680    3.4690    3.4700    3.4710    3.4720    3.4730    3.4740    3.4750 ✓
3.4760    3.4770    3.4780    3.4790    3.4800
Columns 482 through 494
    3.4810    3.4820    3.4830    3.4840    3.4850    3.4860    3.4870    3.4880 ✓
3.4890    3.4900    3.4910    3.4920    3.4930
Columns 495 through 507
    3.4940    3.4950    3.4960    3.4970    3.4980    3.4990    3.5000    3.5010 ✓
3.5020    3.5030    3.5040    3.5050    3.5060
Columns 508 through 520
    3.5070    3.5080    3.5090    3.5100    3.5110    3.5120    3.5130    3.5140 ✓
3.5150    3.5160    3.5170    3.5180    3.5190
Columns 521 through 533
    3.5200    3.5210    3.5220    3.5230    3.5240    3.5250    3.5260    3.5270 ✓
3.5280    3.5290    3.5300    3.5310    3.5320
Columns 534 through 546
    3.5330    3.5340    3.5350    3.5360    3.5370    3.5380    3.5390    3.5400 ✓
3.5410    3.5420    3.5430    3.5440    3.5450
Columns 547 through 559
    3.5460    3.5470    3.5480    3.5490    3.5500    3.5510    3.5520    3.5530 ✓
3.5540    3.5550    3.5560    3.5570    3.5580
Columns 560 through 572
    3.5590    3.5600    3.5610    3.5620    3.5630    3.5640    3.5650    3.5660 ✓
3.5670    3.5680    3.5690    3.5700    3.5710
Columns 573 through 585
    3.5720    3.5730    3.5740    3.5750    3.5760    3.5770    3.5780    3.5790 ✓
3.5800    3.5810    3.5820    3.5830    3.5840
Columns 586 through 598
    3.5850    3.5860    3.5870    3.5880    3.5890    3.5900    3.5910    3.5920 ✓
3.5930    3.5940    3.5950    3.5960    3.5970
Columns 599 through 611
    3.5980    3.5990    3.6000    3.6010    3.6020    3.6030    3.6040    3.6050 ✓
3.6060    3.6070    3.6080    3.6090    3.6100
Columns 612 through 624
    3.6110    3.6120    3.6130    3.6140    3.6150    3.6160    3.6170    3.6180 ✓
3.6190    3.6200    3.6210    3.6220    3.6230
Columns 625 through 637
    3.6240    3.6250    3.6260    3.6270    3.6280    3.6290    3.6300    3.6310 ✓
3.6320    3.6330    3.6340    3.6350    3.6360
Columns 638 through 650
    3.6370    3.6380    3.6390    3.6400    3.6410    3.6420    3.6430    3.6440 ✓
3.6450    3.6460    3.6470    3.6480    3.6490
Columns 651 through 663
    3.6500    3.6510    3.6520    3.6530    3.6540    3.6550    3.6560    3.6570 ✓
3.6580    3.6590    3.6600    3.6610    3.6620
Columns 664 through 676
    3.6630    3.6640    3.6650    3.6660    3.6670    3.6680    3.6690    3.6700 ✓
3.6710    3.6720    3.6730    3.6740    3.6750
Columns 677 through 689
    3.6760    3.6770    3.6780    3.6790    3.6800    3.6810    3.6820    3.6830 ✓
```

```
3.6840    3.6850    3.6860    3.6870    3.6880
Columns 690 through 702
    3.6890    3.6900    3.6910    3.6920    3.6930    3.6940    3.6950    3.6960 ✓
3.6970    3.6980    3.6990    3.7000    3.7010
Columns 703 through 715
    3.7020    3.7030    3.7040    3.7050    3.7060    3.7070    3.7080    3.7090 ✓
3.7100    3.7110    3.7120    3.7130    3.7140
Columns 716 through 728
    3.7150    3.7160    3.7170    3.7180    3.7190    3.7200    3.7210    3.7220 ✓
3.7230    3.7240    3.7250    3.7260    3.7270
Columns 729 through 741
    3.7280    3.7290    3.7300    3.7310    3.7320    3.7330    3.7340    3.7350 ✓
3.7360    3.7370    3.7380    3.7390    3.7400
Columns 742 through 754
    3.7410    3.7420    3.7430    3.7440    3.7450    3.7460    3.7470    3.7480 ✓
3.7490    3.7500    3.7510    3.7520    3.7530
Columns 755 through 767
    3.7540    3.7550    3.7560    3.7570    3.7580    3.7590    3.7600    3.7610 ✓
3.7620    3.7630    3.7640    3.7650    3.7660
Columns 768 through 780
    3.7670    3.7680    3.7690    3.7700    3.7710    3.7720    3.7730    3.7740 ✓
3.7750    3.7760    3.7770    3.7780    3.7790
Columns 781 through 793
    3.7800    3.7810    3.7820    3.7830    3.7840    3.7850    3.7860    3.7870 ✓
3.7880    3.7890    3.7900    3.7910    3.7920
Columns 794 through 806
    3.7930    3.7940    3.7950    3.7960    3.7970    3.7980    3.7990    3.8000 ✓
3.8010    3.8020    3.8030    3.8040    3.8050
Columns 807 through 819
    3.8060    3.8070    3.8080    3.8090    3.8100    3.8110    3.8120    3.8130 ✓
3.8140    3.8150    3.8160    3.8170    3.8180
Columns 820 through 832
    3.8190    3.8200    3.8210    3.8220    3.8230    3.8240    3.8250    3.8260 ✓
3.8270    3.8280    3.8290    3.8300    3.8310
Columns 833 through 845
    3.8320    3.8330    3.8340    3.8350    3.8360    3.8370    3.8380    3.8390 ✓
3.8400    3.8410    3.8420    3.8430    3.8440
Columns 846 through 858
    3.8450    3.8460    3.8470    3.8480    3.8490    3.8500    3.8510    3.8520 ✓
3.8530    3.8540    3.8550    3.8560    3.8570
Columns 859 through 871
    3.8580    3.8590    3.8600    3.8610    3.8620    3.8630    3.8640    3.8650 ✓
3.8660    3.8670    3.8680    3.8690    3.8700
Columns 872 through 884
    3.8710    3.8720    3.8730    3.8740    3.8750    3.8760    3.8770    3.8780 ✓
3.8790    3.8800    3.8810    3.8820    3.8830
Columns 885 through 897
    3.8840    3.8850    3.8860    3.8870    3.8880    3.8890    3.8900    3.8910 ✓
3.8920    3.8930    3.8940    3.8950    3.8960
Columns 898 through 910
    3.8970    3.8980    3.8990    3.9000    3.9010    3.9020    3.9030    3.9040 ✓
```

```
3.9050    3.9060    3.9070    3.9080    3.9090
Columns 911 through 923
    3.9100    3.9110    3.9120    3.9130    3.9140    3.9150    3.9160    3.9170 ✓
3.9180    3.9190    3.9200    3.9210    3.9220
Columns 924 through 936
    3.9230    3.9240    3.9250    3.9260    3.9270    3.9280    3.9290    3.9300 ✓
3.9310    3.9320    3.9330    3.9340    3.9350
Columns 937 through 949
    3.9360    3.9370    3.9380    3.9390    3.9400    3.9410    3.9420    3.9430 ✓
3.9440    3.9450    3.9460    3.9470    3.9480
Columns 950 through 962
    3.9490    3.9500    3.9510    3.9520    3.9530    3.9540    3.9550    3.9560 ✓
3.9570    3.9580    3.9590    3.9600    3.9610
Columns 963 through 975
    3.9620    3.9630    3.9640    3.9650    3.9660    3.9670    3.9680    3.9690 ✓
3.9700    3.9710    3.9720    3.9730    3.9740
Columns 976 through 988
    3.9750    3.9760    3.9770    3.9780    3.9790    3.9800    3.9810    3.9820 ✓
3.9830    3.9840    3.9850    3.9860    3.9870
Columns 989 through 1000
    3.9880    3.9890    3.9900    3.9910    3.9920    3.9930    3.9940    3.9950 ✓
3.9960    3.9970    3.9980    3.9990
unipolar_code =
Columns 1 through 23
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 24 through 46
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 47 through 69
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 70 through 92
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 93 through 115
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 116 through 138
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 139 through 161
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 162 through 184
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 185 through 207
    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 208 through 230
```

[illegible]

[illegible]

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
polar_code =																
	Columns 1 through 23															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 24 through 46															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 47 through 69															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 70 through 92															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 93 through 115															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 116 through 138															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 139 through 161															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 162 through 184															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 185 through 207															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 208 through 230															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 231 through 253															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 254 through 276															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 277 through 299															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 300 through 322															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 323 through 345															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 346 through 368															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	↙
1	1	1	1	1	1	1	1	1								
	Columns 369 through 391															

[illegible]

[illegible]

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 162 through 184
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 185 through 207
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 208 through 230
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 231 through 253
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 254 through 276
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 277 through 299
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 300 through 322
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 323 through 345
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 346 through 368
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 369 through 391
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 392 through 414
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 415 through 437
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 438 through 460
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 461 through 483
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 484 through 506
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 507 through 529
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 530 through 552
```

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 553 through 575
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 576 through 598
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 599 through 621
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 622 through 644
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 645 through 667
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 668 through 690
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 691 through 713
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 714 through 736
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 737 through 759
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 760 through 782
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 783 through 805
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 806 through 828
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 829 through 851
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 852 through 874
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 875 through 897
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 898 through 920
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 921 through 943
```

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 944 through 966
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 967 through 989
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 990 through 1000
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
sign =
1
manchester_code =
Columns 1 through 23
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 24 through 46
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 47 through 69
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 70 through 92
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 93 through 115
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 116 through 138
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 139 through 161
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 162 through 184
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 185 through 207
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 208 through 230
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 231 through 253
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 254 through 276
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 277 through 299
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
```

[illegible]


```

1      1      1      1      1      1      1      1      1      1
Columns 691 through 713
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 714 through 736
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 737 through 759
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 760 through 782
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 783 through 805
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 806 through 828
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 829 through 851
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 852 through 874
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 875 through 897
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 898 through 920
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 921 through 943
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 944 through 966
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 967 through 989
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
Columns 990 through 1000
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
i =
4
t =
Columns 1 through 13
4.0000      4.0010      4.0020      4.0030      4.0040      4.0050      4.0060      4.0070 ✓
4.0080      4.0090      4.0100      4.0110      4.0120
Columns 14 through 26
4.0130      4.0140      4.0150      4.0160      4.0170      4.0180      4.0190      4.0200 ✓
4.0210      4.0220      4.0230      4.0240      4.0250

```

```
Columns 27 through 39
  4.0260    4.0270    4.0280    4.0290    4.0300    4.0310    4.0320    4.0330 ✓
4.0340    4.0350    4.0360    4.0370    4.0380
Columns 40 through 52
  4.0390    4.0400    4.0410    4.0420    4.0430    4.0440    4.0450    4.0460 ✓
4.0470    4.0480    4.0490    4.0500    4.0510
Columns 53 through 65
  4.0520    4.0530    4.0540    4.0550    4.0560    4.0570    4.0580    4.0590 ✓
4.0600    4.0610    4.0620    4.0630    4.0640
Columns 66 through 78
  4.0650    4.0660    4.0670    4.0680    4.0690    4.0700    4.0710    4.0720 ✓
4.0730    4.0740    4.0750    4.0760    4.0770
Columns 79 through 91
  4.0780    4.0790    4.0800    4.0810    4.0820    4.0830    4.0840    4.0850 ✓
4.0860    4.0870    4.0880    4.0890    4.0900
Columns 92 through 104
  4.0910    4.0920    4.0930    4.0940    4.0950    4.0960    4.0970    4.0980 ✓
4.0990    4.1000    4.1010    4.1020    4.1030
Columns 105 through 117
  4.1040    4.1050    4.1060    4.1070    4.1080    4.1090    4.1100    4.1110 ✓
4.1120    4.1130    4.1140    4.1150    4.1160
Columns 118 through 130
  4.1170    4.1180    4.1190    4.1200    4.1210    4.1220    4.1230    4.1240 ✓
4.1250    4.1260    4.1270    4.1280    4.1290
Columns 131 through 143
  4.1300    4.1310    4.1320    4.1330    4.1340    4.1350    4.1360    4.1370 ✓
4.1380    4.1390    4.1400    4.1410    4.1420
Columns 144 through 156
  4.1430    4.1440    4.1450    4.1460    4.1470    4.1480    4.1490    4.1500 ✓
4.1510    4.1520    4.1530    4.1540    4.1550
Columns 157 through 169
  4.1560    4.1570    4.1580    4.1590    4.1600    4.1610    4.1620    4.1630 ✓
4.1640    4.1650    4.1660    4.1670    4.1680
Columns 170 through 182
  4.1690    4.1700    4.1710    4.1720    4.1730    4.1740    4.1750    4.1760 ✓
4.1770    4.1780    4.1790    4.1800    4.1810
Columns 183 through 195
  4.1820    4.1830    4.1840    4.1850    4.1860    4.1870    4.1880    4.1890 ✓
4.1900    4.1910    4.1920    4.1930    4.1940
Columns 196 through 208
  4.1950    4.1960    4.1970    4.1980    4.1990    4.2000    4.2010    4.2020 ✓
4.2030    4.2040    4.2050    4.2060    4.2070
Columns 209 through 221
  4.2080    4.2090    4.2100    4.2110    4.2120    4.2130    4.2140    4.2150 ✓
4.2160    4.2170    4.2180    4.2190    4.2200
Columns 222 through 234
  4.2210    4.2220    4.2230    4.2240    4.2250    4.2260    4.2270    4.2280 ✓
4.2290    4.2300    4.2310    4.2320    4.2330
Columns 235 through 247
  4.2340    4.2350    4.2360    4.2370    4.2380    4.2390    4.2400    4.2410 ✓
4.2420    4.2430    4.2440    4.2450    4.2460
```

```
Columns 248 through 260
  4.2470    4.2480    4.2490    4.2500    4.2510    4.2520    4.2530    4.2540 ✓
4.2550    4.2560    4.2570    4.2580    4.2590
Columns 261 through 273
  4.2600    4.2610    4.2620    4.2630    4.2640    4.2650    4.2660    4.2670 ✓
4.2680    4.2690    4.2700    4.2710    4.2720
Columns 274 through 286
  4.2730    4.2740    4.2750    4.2760    4.2770    4.2780    4.2790    4.2800 ✓
4.2810    4.2820    4.2830    4.2840    4.2850
Columns 287 through 299
  4.2860    4.2870    4.2880    4.2890    4.2900    4.2910    4.2920    4.2930 ✓
4.2940    4.2950    4.2960    4.2970    4.2980
Columns 300 through 312
  4.2990    4.3000    4.3010    4.3020    4.3030    4.3040    4.3050    4.3060 ✓
4.3070    4.3080    4.3090    4.3100    4.3110
Columns 313 through 325
  4.3120    4.3130    4.3140    4.3150    4.3160    4.3170    4.3180    4.3190 ✓
4.3200    4.3210    4.3220    4.3230    4.3240
Columns 326 through 338
  4.3250    4.3260    4.3270    4.3280    4.3290    4.3300    4.3310    4.3320 ✓
4.3330    4.3340    4.3350    4.3360    4.3370
Columns 339 through 351
  4.3380    4.3390    4.3400    4.3410    4.3420    4.3430    4.3440    4.3450 ✓
4.3460    4.3470    4.3480    4.3490    4.3500
Columns 352 through 364
  4.3510    4.3520    4.3530    4.3540    4.3550    4.3560    4.3570    4.3580 ✓
4.3590    4.3600    4.3610    4.3620    4.3630
Columns 365 through 377
  4.3640    4.3650    4.3660    4.3670    4.3680    4.3690    4.3700    4.3710 ✓
4.3720    4.3730    4.3740    4.3750    4.3760
Columns 378 through 390
  4.3770    4.3780    4.3790    4.3800    4.3810    4.3820    4.3830    4.3840 ✓
4.3850    4.3860    4.3870    4.3880    4.3890
Columns 391 through 403
  4.3900    4.3910    4.3920    4.3930    4.3940    4.3950    4.3960    4.3970 ✓
4.3980    4.3990    4.4000    4.4010    4.4020
Columns 404 through 416
  4.4030    4.4040    4.4050    4.4060    4.4070    4.4080    4.4090    4.4100 ✓
4.4110    4.4120    4.4130    4.4140    4.4150
Columns 417 through 429
  4.4160    4.4170    4.4180    4.4190    4.4200    4.4210    4.4220    4.4230 ✓
4.4240    4.4250    4.4260    4.4270    4.4280
Columns 430 through 442
  4.4290    4.4300    4.4310    4.4320    4.4330    4.4340    4.4350    4.4360 ✓
4.4370    4.4380    4.4390    4.4400    4.4410
Columns 443 through 455
  4.4420    4.4430    4.4440    4.4450    4.4460    4.4470    4.4480    4.4490 ✓
4.4500    4.4510    4.4520    4.4530    4.4540
Columns 456 through 468
  4.4550    4.4560    4.4570    4.4580    4.4590    4.4600    4.4610    4.4620 ✓
4.4630    4.4640    4.4650    4.4660    4.4670
```

```
Columns 469 through 481
  4.4680    4.4690    4.4700    4.4710    4.4720    4.4730    4.4740    4.4750 ✓
4.4760    4.4770    4.4780    4.4790    4.4800
Columns 482 through 494
  4.4810    4.4820    4.4830    4.4840    4.4850    4.4860    4.4870    4.4880 ✓
4.4890    4.4900    4.4910    4.4920    4.4930
Columns 495 through 507
  4.4940    4.4950    4.4960    4.4970    4.4980    4.4990    4.5000    4.5010 ✓
4.5020    4.5030    4.5040    4.5050    4.5060
Columns 508 through 520
  4.5070    4.5080    4.5090    4.5100    4.5110    4.5120    4.5130    4.5140 ✓
4.5150    4.5160    4.5170    4.5180    4.5190
Columns 521 through 533
  4.5200    4.5210    4.5220    4.5230    4.5240    4.5250    4.5260    4.5270 ✓
4.5280    4.5290    4.5300    4.5310    4.5320
Columns 534 through 546
  4.5330    4.5340    4.5350    4.5360    4.5370    4.5380    4.5390    4.5400 ✓
4.5410    4.5420    4.5430    4.5440    4.5450
Columns 547 through 559
  4.5460    4.5470    4.5480    4.5490    4.5500    4.5510    4.5520    4.5530 ✓
4.5540    4.5550    4.5560    4.5570    4.5580
Columns 560 through 572
  4.5590    4.5600    4.5610    4.5620    4.5630    4.5640    4.5650    4.5660 ✓
4.5670    4.5680    4.5690    4.5700    4.5710
Columns 573 through 585
  4.5720    4.5730    4.5740    4.5750    4.5760    4.5770    4.5780    4.5790 ✓
4.5800    4.5810    4.5820    4.5830    4.5840
Columns 586 through 598
  4.5850    4.5860    4.5870    4.5880    4.5890    4.5900    4.5910    4.5920 ✓
4.5930    4.5940    4.5950    4.5960    4.5970
Columns 599 through 611
  4.5980    4.5990    4.6000    4.6010    4.6020    4.6030    4.6040    4.6050 ✓
4.6060    4.6070    4.6080    4.6090    4.6100
Columns 612 through 624
  4.6110    4.6120    4.6130    4.6140    4.6150    4.6160    4.6170    4.6180 ✓
4.6190    4.6200    4.6210    4.6220    4.6230
Columns 625 through 637
  4.6240    4.6250    4.6260    4.6270    4.6280    4.6290    4.6300    4.6310 ✓
4.6320    4.6330    4.6340    4.6350    4.6360
Columns 638 through 650
  4.6370    4.6380    4.6390    4.6400    4.6410    4.6420    4.6430    4.6440 ✓
4.6450    4.6460    4.6470    4.6480    4.6490
Columns 651 through 663
  4.6500    4.6510    4.6520    4.6530    4.6540    4.6550    4.6560    4.6570 ✓
4.6580    4.6590    4.6600    4.6610    4.6620
Columns 664 through 676
  4.6630    4.6640    4.6650    4.6660    4.6670    4.6680    4.6690    4.6700 ✓
4.6710    4.6720    4.6730    4.6740    4.6750
Columns 677 through 689
  4.6760    4.6770    4.6780    4.6790    4.6800    4.6810    4.6820    4.6830 ✓
4.6840    4.6850    4.6860    4.6870    4.6880
```

```
Columns 690 through 702
  4.6890    4.6900    4.6910    4.6920    4.6930    4.6940    4.6950    4.6960 ✓
4.6970    4.6980    4.6990    4.7000    4.7010
Columns 703 through 715
  4.7020    4.7030    4.7040    4.7050    4.7060    4.7070    4.7080    4.7090 ✓
4.7100    4.7110    4.7120    4.7130    4.7140
Columns 716 through 728
  4.7150    4.7160    4.7170    4.7180    4.7190    4.7200    4.7210    4.7220 ✓
4.7230    4.7240    4.7250    4.7260    4.7270
Columns 729 through 741
  4.7280    4.7290    4.7300    4.7310    4.7320    4.7330    4.7340    4.7350 ✓
4.7360    4.7370    4.7380    4.7390    4.7400
Columns 742 through 754
  4.7410    4.7420    4.7430    4.7440    4.7450    4.7460    4.7470    4.7480 ✓
4.7490    4.7500    4.7510    4.7520    4.7530
Columns 755 through 767
  4.7540    4.7550    4.7560    4.7570    4.7580    4.7590    4.7600    4.7610 ✓
4.7620    4.7630    4.7640    4.7650    4.7660
Columns 768 through 780
  4.7670    4.7680    4.7690    4.7700    4.7710    4.7720    4.7730    4.7740 ✓
4.7750    4.7760    4.7770    4.7780    4.7790
Columns 781 through 793
  4.7800    4.7810    4.7820    4.7830    4.7840    4.7850    4.7860    4.7870 ✓
4.7880    4.7890    4.7900    4.7910    4.7920
Columns 794 through 806
  4.7930    4.7940    4.7950    4.7960    4.7970    4.7980    4.7990    4.8000 ✓
4.8010    4.8020    4.8030    4.8040    4.8050
Columns 807 through 819
  4.8060    4.8070    4.8080    4.8090    4.8100    4.8110    4.8120    4.8130 ✓
4.8140    4.8150    4.8160    4.8170    4.8180
Columns 820 through 832
  4.8190    4.8200    4.8210    4.8220    4.8230    4.8240    4.8250    4.8260 ✓
4.8270    4.8280    4.8290    4.8300    4.8310
Columns 833 through 845
  4.8320    4.8330    4.8340    4.8350    4.8360    4.8370    4.8380    4.8390 ✓
4.8400    4.8410    4.8420    4.8430    4.8440
Columns 846 through 858
  4.8450    4.8460    4.8470    4.8480    4.8490    4.8500    4.8510    4.8520 ✓
4.8530    4.8540    4.8550    4.8560    4.8570
Columns 859 through 871
  4.8580    4.8590    4.8600    4.8610    4.8620    4.8630    4.8640    4.8650 ✓
4.8660    4.8670    4.8680    4.8690    4.8700
Columns 872 through 884
  4.8710    4.8720    4.8730    4.8740    4.8750    4.8760    4.8770    4.8780 ✓
4.8790    4.8800    4.8810    4.8820    4.8830
Columns 885 through 897
  4.8840    4.8850    4.8860    4.8870    4.8880    4.8890    4.8900    4.8910 ✓
4.8920    4.8930    4.8940    4.8950    4.8960
Columns 898 through 910
  4.8970    4.8980    4.8990    4.9000    4.9010    4.9020    4.9030    4.9040 ✓
4.9050    4.9060    4.9070    4.9080    4.9090
```


[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1	1	1	1	1	1	1	1	1							
	Columns 553 through 575														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 576 through 598														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 599 through 621														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 622 through 644														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 645 through 667														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 668 through 690														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 691 through 713														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 714 through 736														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 737 through 759														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 760 through 782														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 783 through 805														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 806 through 828														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 829 through 851														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 852 through 874														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 875 through 897														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 898 through 920														

1	1	1	1	1	1	1	1	1						
	Columns 944 through 966													
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
	Columns 967 through 989													
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
	Columns 990 through 1000													
	sign =													
-1														
	manchester_code =													
	Columns 1 through 23													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 24 through 46													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 47 through 69													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 70 through 92													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 93 through 115													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 116 through 138													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 139 through 161													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 162 through 184													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 185 through 207													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 208 through 230													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 231 through 253													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 254 through 276													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
	Columns 277 through 299													
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					

```
Columns 300 through 322
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 323 through 345
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 346 through 368
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 369 through 391
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 392 through 414
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 415 through 437
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 438 through 460
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 461 through 483
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 484 through 506
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 1 1 1 1 1 1
Columns 507 through 529
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 530 through 552
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 553 through 575
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 576 through 598
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 599 through 621
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 622 through 644
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 645 through 667
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 668 through 690
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
```

```

Columns 691 through 713
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 714 through 736
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 737 through 759
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 760 through 782
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 783 through 805
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 806 through 828
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 829 through 851
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 852 through 874
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 875 through 897
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 898 through 920
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 921 through 943
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 944 through 966
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 967 through 989
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
Columns 990 through 1000
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1✓
i =
5
t =
Columns 1 through 13
5.0000    5.0010    5.0020    5.0030    5.0040    5.0050    5.0060    5.0070✓
5.0080    5.0090    5.0100    5.0110    5.0120
Columns 14 through 26
5.0130    5.0140    5.0150    5.0160    5.0170    5.0180    5.0190    5.0200✓
5.0210    5.0220    5.0230    5.0240    5.0250
Columns 27 through 39

```



```
5.0260    5.0270    5.0280    5.0290    5.0300    5.0310    5.0320    5.0330 ✓
5.0340    5.0350    5.0360    5.0370    5.0380
Columns 40 through 52
5.0390    5.0400    5.0410    5.0420    5.0430    5.0440    5.0450    5.0460 ✓
5.0470    5.0480    5.0490    5.0500    5.0510
Columns 53 through 65
5.0520    5.0530    5.0540    5.0550    5.0560    5.0570    5.0580    5.0590 ✓
5.0600    5.0610    5.0620    5.0630    5.0640
Columns 66 through 78
5.0650    5.0660    5.0670    5.0680    5.0690    5.0700    5.0710    5.0720 ✓
5.0730    5.0740    5.0750    5.0760    5.0770
Columns 79 through 91
5.0780    5.0790    5.0800    5.0810    5.0820    5.0830    5.0840    5.0850 ✓
5.0860    5.0870    5.0880    5.0890    5.0900
Columns 92 through 104
5.0910    5.0920    5.0930    5.0940    5.0950    5.0960    5.0970    5.0980 ✓
5.0990    5.1000    5.1010    5.1020    5.1030
Columns 105 through 117
5.1040    5.1050    5.1060    5.1070    5.1080    5.1090    5.1100    5.1110 ✓
5.1120    5.1130    5.1140    5.1150    5.1160
Columns 118 through 130
5.1170    5.1180    5.1190    5.1200    5.1210    5.1220    5.1230    5.1240 ✓
5.1250    5.1260    5.1270    5.1280    5.1290
Columns 131 through 143
5.1300    5.1310    5.1320    5.1330    5.1340    5.1350    5.1360    5.1370 ✓
5.1380    5.1390    5.1400    5.1410    5.1420
Columns 144 through 156
5.1430    5.1440    5.1450    5.1460    5.1470    5.1480    5.1490    5.1500 ✓
5.1510    5.1520    5.1530    5.1540    5.1550
Columns 157 through 169
5.1560    5.1570    5.1580    5.1590    5.1600    5.1610    5.1620    5.1630 ✓
5.1640    5.1650    5.1660    5.1670    5.1680
Columns 170 through 182
5.1690    5.1700    5.1710    5.1720    5.1730    5.1740    5.1750    5.1760 ✓
5.1770    5.1780    5.1790    5.1800    5.1810
Columns 183 through 195
5.1820    5.1830    5.1840    5.1850    5.1860    5.1870    5.1880    5.1890 ✓
5.1900    5.1910    5.1920    5.1930    5.1940
Columns 196 through 208
5.1950    5.1960    5.1970    5.1980    5.1990    5.2000    5.2010    5.2020 ✓
5.2030    5.2040    5.2050    5.2060    5.2070
Columns 209 through 221
5.2080    5.2090    5.2100    5.2110    5.2120    5.2130    5.2140    5.2150 ✓
5.2160    5.2170    5.2180    5.2190    5.2200
Columns 222 through 234
5.2210    5.2220    5.2230    5.2240    5.2250    5.2260    5.2270    5.2280 ✓
5.2290    5.2300    5.2310    5.2320    5.2330
Columns 235 through 247
5.2340    5.2350    5.2360    5.2370    5.2380    5.2390    5.2400    5.2410 ✓
5.2420    5.2430    5.2440    5.2450    5.2460
Columns 248 through 260
```

```
5.2470 5.2480 5.2490 5.2500 5.2510 5.2520 5.2530 5.2540 ✓
5.2550 5.2560 5.2570 5.2580 5.2590
Columns 261 through 273
5.2600 5.2610 5.2620 5.2630 5.2640 5.2650 5.2660 5.2670 ✓
5.2680 5.2690 5.2700 5.2710 5.2720
Columns 274 through 286
5.2730 5.2740 5.2750 5.2760 5.2770 5.2780 5.2790 5.2800 ✓
5.2810 5.2820 5.2830 5.2840 5.2850
Columns 287 through 299
5.2860 5.2870 5.2880 5.2890 5.2900 5.2910 5.2920 5.2930 ✓
5.2940 5.2950 5.2960 5.2970 5.2980
Columns 300 through 312
5.2990 5.3000 5.3010 5.3020 5.3030 5.3040 5.3050 5.3060 ✓
5.3070 5.3080 5.3090 5.3100 5.3110
Columns 313 through 325
5.3120 5.3130 5.3140 5.3150 5.3160 5.3170 5.3180 5.3190 ✓
5.3200 5.3210 5.3220 5.3230 5.3240
Columns 326 through 338
5.3250 5.3260 5.3270 5.3280 5.3290 5.3300 5.3310 5.3320 ✓
5.3330 5.3340 5.3350 5.3360 5.3370
Columns 339 through 351
5.3380 5.3390 5.3400 5.3410 5.3420 5.3430 5.3440 5.3450 ✓
5.3460 5.3470 5.3480 5.3490 5.3500
Columns 352 through 364
5.3510 5.3520 5.3530 5.3540 5.3550 5.3560 5.3570 5.3580 ✓
5.3590 5.3600 5.3610 5.3620 5.3630
Columns 365 through 377
5.3640 5.3650 5.3660 5.3670 5.3680 5.3690 5.3700 5.3710 ✓
5.3720 5.3730 5.3740 5.3750 5.3760
Columns 378 through 390
5.3770 5.3780 5.3790 5.3800 5.3810 5.3820 5.3830 5.3840 ✓
5.3850 5.3860 5.3870 5.3880 5.3890
Columns 391 through 403
5.3900 5.3910 5.3920 5.3930 5.3940 5.3950 5.3960 5.3970 ✓
5.3980 5.3990 5.4000 5.4010 5.4020
Columns 404 through 416
5.4030 5.4040 5.4050 5.4060 5.4070 5.4080 5.4090 5.4100 ✓
5.4110 5.4120 5.4130 5.4140 5.4150
Columns 417 through 429
5.4160 5.4170 5.4180 5.4190 5.4200 5.4210 5.4220 5.4230 ✓
5.4240 5.4250 5.4260 5.4270 5.4280
Columns 430 through 442
5.4290 5.4300 5.4310 5.4320 5.4330 5.4340 5.4350 5.4360 ✓
5.4370 5.4380 5.4390 5.4400 5.4410
Columns 443 through 455
5.4420 5.4430 5.4440 5.4450 5.4460 5.4470 5.4480 5.4490 ✓
5.4500 5.4510 5.4520 5.4530 5.4540
Columns 456 through 468
5.4550 5.4560 5.4570 5.4580 5.4590 5.4600 5.4610 5.4620 ✓
5.4630 5.4640 5.4650 5.4660 5.4670
Columns 469 through 481
```

```
5.4680 5.4690 5.4700 5.4710 5.4720 5.4730 5.4740 5.4750 ✓
5.4760 5.4770 5.4780 5.4790 5.4800
Columns 482 through 494
5.4810 5.4820 5.4830 5.4840 5.4850 5.4860 5.4870 5.4880 ✓
5.4890 5.4900 5.4910 5.4920 5.4930
Columns 495 through 507
5.4940 5.4950 5.4960 5.4970 5.4980 5.4990 5.5000 5.5010 ✓
5.5020 5.5030 5.5040 5.5050 5.5060
Columns 508 through 520
5.5070 5.5080 5.5090 5.5100 5.5110 5.5120 5.5130 5.5140 ✓
5.5150 5.5160 5.5170 5.5180 5.5190
Columns 521 through 533
5.5200 5.5210 5.5220 5.5230 5.5240 5.5250 5.5260 5.5270 ✓
5.5280 5.5290 5.5300 5.5310 5.5320
Columns 534 through 546
5.5330 5.5340 5.5350 5.5360 5.5370 5.5380 5.5390 5.5400 ✓
5.5410 5.5420 5.5430 5.5440 5.5450
Columns 547 through 559
5.5460 5.5470 5.5480 5.5490 5.5500 5.5510 5.5520 5.5530 ✓
5.5540 5.5550 5.5560 5.5570 5.5580
Columns 560 through 572
5.5590 5.5600 5.5610 5.5620 5.5630 5.5640 5.5650 5.5660 ✓
5.5670 5.5680 5.5690 5.5700 5.5710
Columns 573 through 585
5.5720 5.5730 5.5740 5.5750 5.5760 5.5770 5.5780 5.5790 ✓
5.5800 5.5810 5.5820 5.5830 5.5840
Columns 586 through 598
5.5850 5.5860 5.5870 5.5880 5.5890 5.5900 5.5910 5.5920 ✓
5.5930 5.5940 5.5950 5.5960 5.5970
Columns 599 through 611
5.5980 5.5990 5.6000 5.6010 5.6020 5.6030 5.6040 5.6050 ✓
5.6060 5.6070 5.6080 5.6090 5.6100
Columns 612 through 624
5.6110 5.6120 5.6130 5.6140 5.6150 5.6160 5.6170 5.6180 ✓
5.6190 5.6200 5.6210 5.6220 5.6230
Columns 625 through 637
5.6240 5.6250 5.6260 5.6270 5.6280 5.6290 5.6300 5.6310 ✓
5.6320 5.6330 5.6340 5.6350 5.6360
Columns 638 through 650
5.6370 5.6380 5.6390 5.6400 5.6410 5.6420 5.6430 5.6440 ✓
5.6450 5.6460 5.6470 5.6480 5.6490
Columns 651 through 663
5.6500 5.6510 5.6520 5.6530 5.6540 5.6550 5.6560 5.6570 ✓
5.6580 5.6590 5.6600 5.6610 5.6620
Columns 664 through 676
5.6630 5.6640 5.6650 5.6660 5.6670 5.6680 5.6690 5.6700 ✓
5.6710 5.6720 5.6730 5.6740 5.6750
Columns 677 through 689
5.6760 5.6770 5.6780 5.6790 5.6800 5.6810 5.6820 5.6830 ✓
5.6840 5.6850 5.6860 5.6870 5.6880
Columns 690 through 702
```

```
5.6890 5.6900 5.6910 5.6920 5.6930 5.6940 5.6950 5.6960 ✓
5.6970 5.6980 5.6990 5.7000 5.7010
Columns 703 through 715
5.7020 5.7030 5.7040 5.7050 5.7060 5.7070 5.7080 5.7090 ✓
5.7100 5.7110 5.7120 5.7130 5.7140
Columns 716 through 728
5.7150 5.7160 5.7170 5.7180 5.7190 5.7200 5.7210 5.7220 ✓
5.7230 5.7240 5.7250 5.7260 5.7270
Columns 729 through 741
5.7280 5.7290 5.7300 5.7310 5.7320 5.7330 5.7340 5.7350 ✓
5.7360 5.7370 5.7380 5.7390 5.7400
Columns 742 through 754
5.7410 5.7420 5.7430 5.7440 5.7450 5.7460 5.7470 5.7480 ✓
5.7490 5.7500 5.7510 5.7520 5.7530
Columns 755 through 767
5.7540 5.7550 5.7560 5.7570 5.7580 5.7590 5.7600 5.7610 ✓
5.7620 5.7630 5.7640 5.7650 5.7660
Columns 768 through 780
5.7670 5.7680 5.7690 5.7700 5.7710 5.7720 5.7730 5.7740 ✓
5.7750 5.7760 5.7770 5.7780 5.7790
Columns 781 through 793
5.7800 5.7810 5.7820 5.7830 5.7840 5.7850 5.7860 5.7870 ✓
5.7880 5.7890 5.7900 5.7910 5.7920
Columns 794 through 806
5.7930 5.7940 5.7950 5.7960 5.7970 5.7980 5.7990 5.8000 ✓
5.8010 5.8020 5.8030 5.8040 5.8050
Columns 807 through 819
5.8060 5.8070 5.8080 5.8090 5.8100 5.8110 5.8120 5.8130 ✓
5.8140 5.8150 5.8160 5.8170 5.8180
Columns 820 through 832
5.8190 5.8200 5.8210 5.8220 5.8230 5.8240 5.8250 5.8260 ✓
5.8270 5.8280 5.8290 5.8300 5.8310
Columns 833 through 845
5.8320 5.8330 5.8340 5.8350 5.8360 5.8370 5.8380 5.8390 ✓
5.8400 5.8410 5.8420 5.8430 5.8440
Columns 846 through 858
5.8450 5.8460 5.8470 5.8480 5.8490 5.8500 5.8510 5.8520 ✓
5.8530 5.8540 5.8550 5.8560 5.8570
Columns 859 through 871
5.8580 5.8590 5.8600 5.8610 5.8620 5.8630 5.8640 5.8650 ✓
5.8660 5.8670 5.8680 5.8690 5.8700
Columns 872 through 884
5.8710 5.8720 5.8730 5.8740 5.8750 5.8760 5.8770 5.8780 ✓
5.8790 5.8800 5.8810 5.8820 5.8830
Columns 885 through 897
5.8840 5.8850 5.8860 5.8870 5.8880 5.8890 5.8900 5.8910 ✓
5.8920 5.8930 5.8940 5.8950 5.8960
Columns 898 through 910
5.8970 5.8980 5.8990 5.9000 5.9010 5.9020 5.9030 5.9040 ✓
5.9050 5.9060 5.9070 5.9080 5.9090
Columns 911 through 923
```

```
5.9100    5.9110    5.9120    5.9130    5.9140    5.9150    5.9160    5.9170 ✓
5.9180    5.9190    5.9200    5.9210    5.9220
Columns 924 through 936
5.9230    5.9240    5.9250    5.9260    5.9270    5.9280    5.9290    5.9300 ✓
5.9310    5.9320    5.9330    5.9340    5.9350
Columns 937 through 949
5.9360    5.9370    5.9380    5.9390    5.9400    5.9410    5.9420    5.9430 ✓
5.9440    5.9450    5.9460    5.9470    5.9480
Columns 950 through 962
5.9490    5.9500    5.9510    5.9520    5.9530    5.9540    5.9550    5.9560 ✓
5.9570    5.9580    5.9590    5.9600    5.9610
Columns 963 through 975
5.9620    5.9630    5.9640    5.9650    5.9660    5.9670    5.9680    5.9690 ✓
5.9700    5.9710    5.9720    5.9730    5.9740
Columns 976 through 988
5.9750    5.9760    5.9770    5.9780    5.9790    5.9800    5.9810    5.9820 ✓
5.9830    5.9840    5.9850    5.9860    5.9870
Columns 989 through 1000
5.9880    5.9890    5.9900    5.9910    5.9920    5.9930    5.9940    5.9950 ✓
5.9960    5.9970    5.9980    5.9990
unipolar_code =
0
polar_code =
Columns 1 through 23
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 24 through 46
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 47 through 69
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 70 through 92
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 93 through 115
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 116 through 138
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 139 through 161
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 162 through 184
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 185 through 207
-1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 208 through 230
```

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 231 through 253  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 254 through 276  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 277 through 299  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 300 through 322  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 323 through 345  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 346 through 368  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 369 through 391  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 392 through 414  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 415 through 437  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 438 through 460  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 461 through 483  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 484 through 506  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 507 through 529  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 530 through 552  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 553 through 575  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 576 through 598  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 599 through 621
```

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 622 through 644
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 645 through 667
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 668 through 690
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 691 through 713
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 714 through 736
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 737 through 759
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 760 through 782
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 783 through 805
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 806 through 828
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 829 through 851
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 852 through 874
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 875 through 897
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 898 through 920
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 921 through 943
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 944 through 966
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 967 through 989
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 990 through 1000
```

[illegible]

[illegible]

```
-1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 760 through 782
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 783 through 805
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 806 through 828
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 829 through 851
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 852 through 874
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 875 through 897
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 898 through 920
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 921 through 943
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 944 through 966
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 967 through 989
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1 ✓
-1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
Columns 990 through 1000
      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1      -1
i =
      6
t =
Columns 1 through 13
      6.0000      6.0010      6.0020      6.0030      6.0040      6.0050      6.0060      6.0070 ✓
6.0080      6.0090      6.0100      6.0110      6.0120
Columns 14 through 26
      6.0130      6.0140      6.0150      6.0160      6.0170      6.0180      6.0190      6.0200 ✓
6.0210      6.0220      6.0230      6.0240      6.0250
Columns 27 through 39
      6.0260      6.0270      6.0280      6.0290      6.0300      6.0310      6.0320      6.0330 ✓
6.0340      6.0350      6.0360      6.0370      6.0380
Columns 40 through 52
      6.0390      6.0400      6.0410      6.0420      6.0430      6.0440      6.0450      6.0460 ✓
6.0470      6.0480      6.0490      6.0500      6.0510
Columns 53 through 65
      6.0520      6.0530      6.0540      6.0550      6.0560      6.0570      6.0580      6.0590 ✓
6.0600      6.0610      6.0620      6.0630      6.0640
```

```
Columns 66 through 78
    6.0650    6.0660    6.0670    6.0680    6.0690    6.0700    6.0710    6.0720 ✓
6.0730    6.0740    6.0750    6.0760    6.0770
Columns 79 through 91
    6.0780    6.0790    6.0800    6.0810    6.0820    6.0830    6.0840    6.0850 ✓
6.0860    6.0870    6.0880    6.0890    6.0900
Columns 92 through 104
    6.0910    6.0920    6.0930    6.0940    6.0950    6.0960    6.0970    6.0980 ✓
6.0990    6.1000    6.1010    6.1020    6.1030
Columns 105 through 117
    6.1040    6.1050    6.1060    6.1070    6.1080    6.1090    6.1100    6.1110 ✓
6.1120    6.1130    6.1140    6.1150    6.1160
Columns 118 through 130
    6.1170    6.1180    6.1190    6.1200    6.1210    6.1220    6.1230    6.1240 ✓
6.1250    6.1260    6.1270    6.1280    6.1290
Columns 131 through 143
    6.1300    6.1310    6.1320    6.1330    6.1340    6.1350    6.1360    6.1370 ✓
6.1380    6.1390    6.1400    6.1410    6.1420
Columns 144 through 156
    6.1430    6.1440    6.1450    6.1460    6.1470    6.1480    6.1490    6.1500 ✓
6.1510    6.1520    6.1530    6.1540    6.1550
Columns 157 through 169
    6.1560    6.1570    6.1580    6.1590    6.1600    6.1610    6.1620    6.1630 ✓
6.1640    6.1650    6.1660    6.1670    6.1680
Columns 170 through 182
    6.1690    6.1700    6.1710    6.1720    6.1730    6.1740    6.1750    6.1760 ✓
6.1770    6.1780    6.1790    6.1800    6.1810
Columns 183 through 195
    6.1820    6.1830    6.1840    6.1850    6.1860    6.1870    6.1880    6.1890 ✓
6.1900    6.1910    6.1920    6.1930    6.1940
Columns 196 through 208
    6.1950    6.1960    6.1970    6.1980    6.1990    6.2000    6.2010    6.2020 ✓
6.2030    6.2040    6.2050    6.2060    6.2070
Columns 209 through 221
    6.2080    6.2090    6.2100    6.2110    6.2120    6.2130    6.2140    6.2150 ✓
6.2160    6.2170    6.2180    6.2190    6.2200
Columns 222 through 234
    6.2210    6.2220    6.2230    6.2240    6.2250    6.2260    6.2270    6.2280 ✓
6.2290    6.2300    6.2310    6.2320    6.2330
Columns 235 through 247
    6.2340    6.2350    6.2360    6.2370    6.2380    6.2390    6.2400    6.2410 ✓
6.2420    6.2430    6.2440    6.2450    6.2460
Columns 248 through 260
    6.2470    6.2480    6.2490    6.2500    6.2510    6.2520    6.2530    6.2540 ✓
6.2550    6.2560    6.2570    6.2580    6.2590
Columns 261 through 273
    6.2600    6.2610    6.2620    6.2630    6.2640    6.2650    6.2660    6.2670 ✓
6.2680    6.2690    6.2700    6.2710    6.2720
Columns 274 through 286
    6.2730    6.2740    6.2750    6.2760    6.2770    6.2780    6.2790    6.2800 ✓
6.2810    6.2820    6.2830    6.2840    6.2850
```

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Columns 287 through 299
  6.2860    6.2870    6.2880    6.2890    6.2900    6.2910    6.2920    6.2930 ✓
6.2940    6.2950    6.2960    6.2970    6.2980
Columns 300 through 312
  6.2990    6.3000    6.3010    6.3020    6.3030    6.3040    6.3050    6.3060 ✓
6.3070    6.3080    6.3090    6.3100    6.3110
Columns 313 through 325
  6.3120    6.3130    6.3140    6.3150    6.3160    6.3170    6.3180    6.3190 ✓
6.3200    6.3210    6.3220    6.3230    6.3240
Columns 326 through 338
  6.3250    6.3260    6.3270    6.3280    6.3290    6.3300    6.3310    6.3320 ✓
6.3330    6.3340    6.3350    6.3360    6.3370
Columns 339 through 351
  6.3380    6.3390    6.3400    6.3410    6.3420    6.3430    6.3440    6.3450 ✓
6.3460    6.3470    6.3480    6.3490    6.3500
Columns 352 through 364
  6.3510    6.3520    6.3530    6.3540    6.3550    6.3560    6.3570    6.3580 ✓
6.3590    6.3600    6.3610    6.3620    6.3630
Columns 365 through 377
  6.3640    6.3650    6.3660    6.3670    6.3680    6.3690    6.3700    6.3710 ✓
6.3720    6.3730    6.3740    6.3750    6.3760
Columns 378 through 390
  6.3770    6.3780    6.3790    6.3800    6.3810    6.3820    6.3830    6.3840 ✓
6.3850    6.3860    6.3870    6.3880    6.3890
Columns 391 through 403
  6.3900    6.3910    6.3920    6.3930    6.3940    6.3950    6.3960    6.3970 ✓
6.3980    6.3990    6.4000    6.4010    6.4020
Columns 404 through 416
  6.4030    6.4040    6.4050    6.4060    6.4070    6.4080    6.4090    6.4100 ✓
6.4110    6.4120    6.4130    6.4140    6.4150
Columns 417 through 429
  6.4160    6.4170    6.4180    6.4190    6.4200    6.4210    6.4220    6.4230 ✓
6.4240    6.4250    6.4260    6.4270    6.4280
Columns 430 through 442
  6.4290    6.4300    6.4310    6.4320    6.4330    6.4340    6.4350    6.4360 ✓
6.4370    6.4380    6.4390    6.4400    6.4410
Columns 443 through 455
  6.4420    6.4430    6.4440    6.4450    6.4460    6.4470    6.4480    6.4490 ✓
6.4500    6.4510    6.4520    6.4530    6.4540
Columns 456 through 468
  6.4550    6.4560    6.4570    6.4580    6.4590    6.4600    6.4610    6.4620 ✓
6.4630    6.4640    6.4650    6.4660    6.4670
Columns 469 through 481
  6.4680    6.4690    6.4700    6.4710    6.4720    6.4730    6.4740    6.4750 ✓
6.4760    6.4770    6.4780    6.4790    6.4800
Columns 482 through 494
  6.4810    6.4820    6.4830    6.4840    6.4850    6.4860    6.4870    6.4880 ✓
6.4890    6.4900    6.4910    6.4920    6.4930
Columns 495 through 507
  6.4940    6.4950    6.4960    6.4970    6.4980    6.4990    6.5000    6.5010 ✓
6.5020    6.5030    6.5040    6.5050    6.5060
```

```
Columns 508 through 520
  6.5070    6.5080    6.5090    6.5100    6.5110    6.5120    6.5130    6.5140 ✓
6.5150    6.5160    6.5170    6.5180    6.5190
Columns 521 through 533
  6.5200    6.5210    6.5220    6.5230    6.5240    6.5250    6.5260    6.5270 ✓
6.5280    6.5290    6.5300    6.5310    6.5320
Columns 534 through 546
  6.5330    6.5340    6.5350    6.5360    6.5370    6.5380    6.5390    6.5400 ✓
6.5410    6.5420    6.5430    6.5440    6.5450
Columns 547 through 559
  6.5460    6.5470    6.5480    6.5490    6.5500    6.5510    6.5520    6.5530 ✓
6.5540    6.5550    6.5560    6.5570    6.5580
Columns 560 through 572
  6.5590    6.5600    6.5610    6.5620    6.5630    6.5640    6.5650    6.5660 ✓
6.5670    6.5680    6.5690    6.5700    6.5710
Columns 573 through 585
  6.5720    6.5730    6.5740    6.5750    6.5760    6.5770    6.5780    6.5790 ✓
6.5800    6.5810    6.5820    6.5830    6.5840
Columns 586 through 598
  6.5850    6.5860    6.5870    6.5880    6.5890    6.5900    6.5910    6.5920 ✓
6.5930    6.5940    6.5950    6.5960    6.5970
Columns 599 through 611
  6.5980    6.5990    6.6000    6.6010    6.6020    6.6030    6.6040    6.6050 ✓
6.6060    6.6070    6.6080    6.6090    6.6100
Columns 612 through 624
  6.6110    6.6120    6.6130    6.6140    6.6150    6.6160    6.6170    6.6180 ✓
6.6190    6.6200    6.6210    6.6220    6.6230
Columns 625 through 637
  6.6240    6.6250    6.6260    6.6270    6.6280    6.6290    6.6300    6.6310 ✓
6.6320    6.6330    6.6340    6.6350    6.6360
Columns 638 through 650
  6.6370    6.6380    6.6390    6.6400    6.6410    6.6420    6.6430    6.6440 ✓
6.6450    6.6460    6.6470    6.6480    6.6490
Columns 651 through 663
  6.6500    6.6510    6.6520    6.6530    6.6540    6.6550    6.6560    6.6570 ✓
6.6580    6.6590    6.6600    6.6610    6.6620
Columns 664 through 676
  6.6630    6.6640    6.6650    6.6660    6.6670    6.6680    6.6690    6.6700 ✓
6.6710    6.6720    6.6730    6.6740    6.6750
Columns 677 through 689
  6.6760    6.6770    6.6780    6.6790    6.6800    6.6810    6.6820    6.6830 ✓
6.6840    6.6850    6.6860    6.6870    6.6880
Columns 690 through 702
  6.6890    6.6900    6.6910    6.6920    6.6930    6.6940    6.6950    6.6960 ✓
6.6970    6.6980    6.6990    6.7000    6.7010
Columns 703 through 715
  6.7020    6.7030    6.7040    6.7050    6.7060    6.7070    6.7080    6.7090 ✓
6.7100    6.7110    6.7120    6.7130    6.7140
Columns 716 through 728
  6.7150    6.7160    6.7170    6.7180    6.7190    6.7200    6.7210    6.7220 ✓
6.7230    6.7240    6.7250    6.7260    6.7270
```

```
Columns 729 through 741
  6.7280    6.7290    6.7300    6.7310    6.7320    6.7330    6.7340    6.7350 ✓
6.7360    6.7370    6.7380    6.7390    6.7400
Columns 742 through 754
  6.7410    6.7420    6.7430    6.7440    6.7450    6.7460    6.7470    6.7480 ✓
6.7490    6.7500    6.7510    6.7520    6.7530
Columns 755 through 767
  6.7540    6.7550    6.7560    6.7570    6.7580    6.7590    6.7600    6.7610 ✓
6.7620    6.7630    6.7640    6.7650    6.7660
Columns 768 through 780
  6.7670    6.7680    6.7690    6.7700    6.7710    6.7720    6.7730    6.7740 ✓
6.7750    6.7760    6.7770    6.7780    6.7790
Columns 781 through 793
  6.7800    6.7810    6.7820    6.7830    6.7840    6.7850    6.7860    6.7870 ✓
6.7880    6.7890    6.7900    6.7910    6.7920
Columns 794 through 806
  6.7930    6.7940    6.7950    6.7960    6.7970    6.7980    6.7990    6.8000 ✓
6.8010    6.8020    6.8030    6.8040    6.8050
Columns 807 through 819
  6.8060    6.8070    6.8080    6.8090    6.8100    6.8110    6.8120    6.8130 ✓
6.8140    6.8150    6.8160    6.8170    6.8180
Columns 820 through 832
  6.8190    6.8200    6.8210    6.8220    6.8230    6.8240    6.8250    6.8260 ✓
6.8270    6.8280    6.8290    6.8300    6.8310
Columns 833 through 845
  6.8320    6.8330    6.8340    6.8350    6.8360    6.8370    6.8380    6.8390 ✓
6.8400    6.8410    6.8420    6.8430    6.8440
Columns 846 through 858
  6.8450    6.8460    6.8470    6.8480    6.8490    6.8500    6.8510    6.8520 ✓
6.8530    6.8540    6.8550    6.8560    6.8570
Columns 859 through 871
  6.8580    6.8590    6.8600    6.8610    6.8620    6.8630    6.8640    6.8650 ✓
6.8660    6.8670    6.8680    6.8690    6.8700
Columns 872 through 884
  6.8710    6.8720    6.8730    6.8740    6.8750    6.8760    6.8770    6.8780 ✓
6.8790    6.8800    6.8810    6.8820    6.8830
Columns 885 through 897
  6.8840    6.8850    6.8860    6.8870    6.8880    6.8890    6.8900    6.8910 ✓
6.8920    6.8930    6.8940    6.8950    6.8960
Columns 898 through 910
  6.8970    6.8980    6.8990    6.9000    6.9010    6.9020    6.9030    6.9040 ✓
6.9050    6.9060    6.9070    6.9080    6.9090
Columns 911 through 923
  6.9100    6.9110    6.9120    6.9130    6.9140    6.9150    6.9160    6.9170 ✓
6.9180    6.9190    6.9200    6.9210    6.9220
Columns 924 through 936
  6.9230    6.9240    6.9250    6.9260    6.9270    6.9280    6.9290    6.9300 ✓
6.9310    6.9320    6.9330    6.9340    6.9350
Columns 937 through 949
  6.9360    6.9370    6.9380    6.9390    6.9400    6.9410    6.9420    6.9430 ✓
6.9440    6.9450    6.9460    6.9470    6.9480
```

[illegible]

[illegible]

1	1	1	1	1	1	1	1	1							
	Columns 691 through 713														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 714 through 736														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 737 through 759														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 760 through 782														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 783 through 805														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 806 through 828														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 829 through 851														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 852 through 874														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 875 through 897														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 898 through 920														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 921 through 943														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 944 through 966														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 967 through 989														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 990 through 1000														
	1	1	1	1	1	1	1	1	1	1	1				
polar_code =															
	Columns 1 through 23														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1	1	1	1	1	1							
	Columns 24 through 46														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1↙
1	1	1	1												

[illegible]

[illegible]

[illegible]

-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 231 through 253														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 254 through 276														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 277 through 299														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 300 through 322														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 323 through 345														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 346 through 368														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 369 through 391														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 392 through 414														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 415 through 437														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 438 through 460														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 461 through 483														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 484 through 506														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 507 through 529														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 530 through 552														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 553 through 575														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 576 through 598														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1</										

[illegible]

Sign =															
1															
manchester_code =															
Columns 1 through 23															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 24 through 46															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 47 through 69															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 70 through 92															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 93 through 115															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 116 through 138															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 139 through 161															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 162 through 184															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 185 through 207															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 208 through 230															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 231 through 253															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 254 through 276															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 277 through 299															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 300 through 322															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 323 through 345															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							
Columns 346 through 368															
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1							

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Columns 369 through 391
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 392 through 414
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 415 through 437
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 438 through 460
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 461 through 483
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 484 through 506
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 1 1 1 1 1 1
Columns 507 through 529
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 530 through 552
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 553 through 575
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 576 through 598
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 599 through 621
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 622 through 644
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 645 through 667
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 668 through 690
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 691 through 713
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 714 through 736
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 737 through 759
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
```



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Columns 760 through 782
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 783 through 805
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 806 through 828
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 829 through 851
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 852 through 874
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 875 through 897
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 898 through 920
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 921 through 943
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 944 through 966
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 967 through 989
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 990 through 1000
1      1      1      1      1      1      1      1      1      1      1      1      1      1      1
i =
    7
t =
Columns 1 through 13
7.0000    7.0010    7.0020    7.0030    7.0040    7.0050    7.0060    7.0070 ✓
7.0080    7.0090    7.0100    7.0110    7.0120
Columns 14 through 26
7.0130    7.0140    7.0150    7.0160    7.0170    7.0180    7.0190    7.0200 ✓
7.0210    7.0220    7.0230    7.0240    7.0250
Columns 27 through 39
7.0260    7.0270    7.0280    7.0290    7.0300    7.0310    7.0320    7.0330 ✓
7.0340    7.0350    7.0360    7.0370    7.0380
Columns 40 through 52
7.0390    7.0400    7.0410    7.0420    7.0430    7.0440    7.0450    7.0460 ✓
7.0470    7.0480    7.0490    7.0500    7.0510
Columns 53 through 65
7.0520    7.0530    7.0540    7.0550    7.0560    7.0570    7.0580    7.0590 ✓
7.0600    7.0610    7.0620    7.0630    7.0640
Columns 66 through 78

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```
7.0650 7.0660 7.0670 7.0680 7.0690 7.0700 7.0710 7.0720 ✓
7.0730 7.0740 7.0750 7.0760 7.0770
Columns 79 through 91
7.0780 7.0790 7.0800 7.0810 7.0820 7.0830 7.0840 7.0850 ✓
7.0860 7.0870 7.0880 7.0890 7.0900
Columns 92 through 104
7.0910 7.0920 7.0930 7.0940 7.0950 7.0960 7.0970 7.0980 ✓
7.0990 7.1000 7.1010 7.1020 7.1030
Columns 105 through 117
7.1040 7.1050 7.1060 7.1070 7.1080 7.1090 7.1100 7.1110 ✓
7.1120 7.1130 7.1140 7.1150 7.1160
Columns 118 through 130
7.1170 7.1180 7.1190 7.1200 7.1210 7.1220 7.1230 7.1240 ✓
7.1250 7.1260 7.1270 7.1280 7.1290
Columns 131 through 143
7.1300 7.1310 7.1320 7.1330 7.1340 7.1350 7.1360 7.1370 ✓
7.1380 7.1390 7.1400 7.1410 7.1420
Columns 144 through 156
7.1430 7.1440 7.1450 7.1460 7.1470 7.1480 7.1490 7.1500 ✓
7.1510 7.1520 7.1530 7.1540 7.1550
Columns 157 through 169
7.1560 7.1570 7.1580 7.1590 7.1600 7.1610 7.1620 7.1630 ✓
7.1640 7.1650 7.1660 7.1670 7.1680
Columns 170 through 182
7.1690 7.1700 7.1710 7.1720 7.1730 7.1740 7.1750 7.1760 ✓
7.1770 7.1780 7.1790 7.1800 7.1810
Columns 183 through 195
7.1820 7.1830 7.1840 7.1850 7.1860 7.1870 7.1880 7.1890 ✓
7.1900 7.1910 7.1920 7.1930 7.1940
Columns 196 through 208
7.1950 7.1960 7.1970 7.1980 7.1990 7.2000 7.2010 7.2020 ✓
7.2030 7.2040 7.2050 7.2060 7.2070
Columns 209 through 221
7.2080 7.2090 7.2100 7.2110 7.2120 7.2130 7.2140 7.2150 ✓
7.2160 7.2170 7.2180 7.2190 7.2200
Columns 222 through 234
7.2210 7.2220 7.2230 7.2240 7.2250 7.2260 7.2270 7.2280 ✓
7.2290 7.2300 7.2310 7.2320 7.2330
Columns 235 through 247
7.2340 7.2350 7.2360 7.2370 7.2380 7.2390 7.2400 7.2410 ✓
7.2420 7.2430 7.2440 7.2450 7.2460
Columns 248 through 260
7.2470 7.2480 7.2490 7.2500 7.2510 7.2520 7.2530 7.2540 ✓
7.2550 7.2560 7.2570 7.2580 7.2590
Columns 261 through 273
7.2600 7.2610 7.2620 7.2630 7.2640 7.2650 7.2660 7.2670 ✓
7.2680 7.2690 7.2700 7.2710 7.2720
Columns 274 through 286
7.2730 7.2740 7.2750 7.2760 7.2770 7.2780 7.2790 7.2800 ✓
7.2810 7.2820 7.2830 7.2840 7.2850
Columns 287 through 299
```

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7.2860 7.2870 7.2880 7.2890 7.2900 7.2910 7.2920 7.2930 ✓
7.2940 7.2950 7.2960 7.2970 7.2980
Columns 300 through 312
7.2990 7.3000 7.3010 7.3020 7.3030 7.3040 7.3050 7.3060 ✓
7.3070 7.3080 7.3090 7.3100 7.3110
Columns 313 through 325
7.3120 7.3130 7.3140 7.3150 7.3160 7.3170 7.3180 7.3190 ✓
7.3200 7.3210 7.3220 7.3230 7.3240
Columns 326 through 338
7.3250 7.3260 7.3270 7.3280 7.3290 7.3300 7.3310 7.3320 ✓
7.3330 7.3340 7.3350 7.3360 7.3370
Columns 339 through 351
7.3380 7.3390 7.3400 7.3410 7.3420 7.3430 7.3440 7.3450 ✓
7.3460 7.3470 7.3480 7.3490 7.3500
Columns 352 through 364
7.3510 7.3520 7.3530 7.3540 7.3550 7.3560 7.3570 7.3580 ✓
7.3590 7.3600 7.3610 7.3620 7.3630
Columns 365 through 377
7.3640 7.3650 7.3660 7.3670 7.3680 7.3690 7.3700 7.3710 ✓
7.3720 7.3730 7.3740 7.3750 7.3760
Columns 378 through 390
7.3770 7.3780 7.3790 7.3800 7.3810 7.3820 7.3830 7.3840 ✓
7.3850 7.3860 7.3870 7.3880 7.3890
Columns 391 through 403
7.3900 7.3910 7.3920 7.3930 7.3940 7.3950 7.3960 7.3970 ✓
7.3980 7.3990 7.4000 7.4010 7.4020
Columns 404 through 416
7.4030 7.4040 7.4050 7.4060 7.4070 7.4080 7.4090 7.4100 ✓
7.4110 7.4120 7.4130 7.4140 7.4150
Columns 417 through 429
7.4160 7.4170 7.4180 7.4190 7.4200 7.4210 7.4220 7.4230 ✓
7.4240 7.4250 7.4260 7.4270 7.4280
Columns 430 through 442
7.4290 7.4300 7.4310 7.4320 7.4330 7.4340 7.4350 7.4360 ✓
7.4370 7.4380 7.4390 7.4400 7.4410
Columns 443 through 455
7.4420 7.4430 7.4440 7.4450 7.4460 7.4470 7.4480 7.4490 ✓
7.4500 7.4510 7.4520 7.4530 7.4540
Columns 456 through 468
7.4550 7.4560 7.4570 7.4580 7.4590 7.4600 7.4610 7.4620 ✓
7.4630 7.4640 7.4650 7.4660 7.4670
Columns 469 through 481
7.4680 7.4690 7.4700 7.4710 7.4720 7.4730 7.4740 7.4750 ✓
7.4760 7.4770 7.4780 7.4790 7.4800
Columns 482 through 494
7.4810 7.4820 7.4830 7.4840 7.4850 7.4860 7.4870 7.4880 ✓
7.4890 7.4900 7.4910 7.4920 7.4930
Columns 495 through 507
7.4940 7.4950 7.4960 7.4970 7.4980 7.4990 7.5000 7.5010 ✓
7.5020 7.5030 7.5040 7.5050 7.5060
Columns 508 through 520
```

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7.5070 7.5080 7.5090 7.5100 7.5110 7.5120 7.5130 7.5140 ✓
7.5150 7.5160 7.5170 7.5180 7.5190
Columns 521 through 533
7.5200 7.5210 7.5220 7.5230 7.5240 7.5250 7.5260 7.5270 ✓
7.5280 7.5290 7.5300 7.5310 7.5320
Columns 534 through 546
7.5330 7.5340 7.5350 7.5360 7.5370 7.5380 7.5390 7.5400 ✓
7.5410 7.5420 7.5430 7.5440 7.5450
Columns 547 through 559
7.5460 7.5470 7.5480 7.5490 7.5500 7.5510 7.5520 7.5530 ✓
7.5540 7.5550 7.5560 7.5570 7.5580
Columns 560 through 572
7.5590 7.5600 7.5610 7.5620 7.5630 7.5640 7.5650 7.5660 ✓
7.5670 7.5680 7.5690 7.5700 7.5710
Columns 573 through 585
7.5720 7.5730 7.5740 7.5750 7.5760 7.5770 7.5780 7.5790 ✓
7.5800 7.5810 7.5820 7.5830 7.5840
Columns 586 through 598
7.5850 7.5860 7.5870 7.5880 7.5890 7.5900 7.5910 7.5920 ✓
7.5930 7.5940 7.5950 7.5960 7.5970
Columns 599 through 611
7.5980 7.5990 7.6000 7.6010 7.6020 7.6030 7.6040 7.6050 ✓
7.6060 7.6070 7.6080 7.6090 7.6100
Columns 612 through 624
7.6110 7.6120 7.6130 7.6140 7.6150 7.6160 7.6170 7.6180 ✓
7.6190 7.6200 7.6210 7.6220 7.6230
Columns 625 through 637
7.6240 7.6250 7.6260 7.6270 7.6280 7.6290 7.6300 7.6310 ✓
7.6320 7.6330 7.6340 7.6350 7.6360
Columns 638 through 650
7.6370 7.6380 7.6390 7.6400 7.6410 7.6420 7.6430 7.6440 ✓
7.6450 7.6460 7.6470 7.6480 7.6490
Columns 651 through 663
7.6500 7.6510 7.6520 7.6530 7.6540 7.6550 7.6560 7.6570 ✓
7.6580 7.6590 7.6600 7.6610 7.6620
Columns 664 through 676
7.6630 7.6640 7.6650 7.6660 7.6670 7.6680 7.6690 7.6700 ✓
7.6710 7.6720 7.6730 7.6740 7.6750
Columns 677 through 689
7.6760 7.6770 7.6780 7.6790 7.6800 7.6810 7.6820 7.6830 ✓
7.6840 7.6850 7.6860 7.6870 7.6880
Columns 690 through 702
7.6890 7.6900 7.6910 7.6920 7.6930 7.6940 7.6950 7.6960 ✓
7.6970 7.6980 7.6990 7.7000 7.7010
Columns 703 through 715
7.7020 7.7030 7.7040 7.7050 7.7060 7.7070 7.7080 7.7090 ✓
7.7100 7.7110 7.7120 7.7130 7.7140
Columns 716 through 728
7.7150 7.7160 7.7170 7.7180 7.7190 7.7200 7.7210 7.7220 ✓
7.7230 7.7240 7.7250 7.7260 7.7270
Columns 729 through 741
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```
7.7280 7.7290 7.7300 7.7310 7.7320 7.7330 7.7340 7.7350 ✓
7.7360 7.7370 7.7380 7.7390 7.7400
Columns 742 through 754
7.7410 7.7420 7.7430 7.7440 7.7450 7.7460 7.7470 7.7480 ✓
7.7490 7.7500 7.7510 7.7520 7.7530
Columns 755 through 767
7.7540 7.7550 7.7560 7.7570 7.7580 7.7590 7.7600 7.7610 ✓
7.7620 7.7630 7.7640 7.7650 7.7660
Columns 768 through 780
7.7670 7.7680 7.7690 7.7700 7.7710 7.7720 7.7730 7.7740 ✓
7.7750 7.7760 7.7770 7.7780 7.7790
Columns 781 through 793
7.7800 7.7810 7.7820 7.7830 7.7840 7.7850 7.7860 7.7870 ✓
7.7880 7.7890 7.7900 7.7910 7.7920
Columns 794 through 806
7.7930 7.7940 7.7950 7.7960 7.7970 7.7980 7.7990 7.8000 ✓
7.8010 7.8020 7.8030 7.8040 7.8050
Columns 807 through 819
7.8060 7.8070 7.8080 7.8090 7.8100 7.8110 7.8120 7.8130 ✓
7.8140 7.8150 7.8160 7.8170 7.8180
Columns 820 through 832
7.8190 7.8200 7.8210 7.8220 7.8230 7.8240 7.8250 7.8260 ✓
7.8270 7.8280 7.8290 7.8300 7.8310
Columns 833 through 845
7.8320 7.8330 7.8340 7.8350 7.8360 7.8370 7.8380 7.8390 ✓
7.8400 7.8410 7.8420 7.8430 7.8440
Columns 846 through 858
7.8450 7.8460 7.8470 7.8480 7.8490 7.8500 7.8510 7.8520 ✓
7.8530 7.8540 7.8550 7.8560 7.8570
Columns 859 through 871
7.8580 7.8590 7.8600 7.8610 7.8620 7.8630 7.8640 7.8650 ✓
7.8660 7.8670 7.8680 7.8690 7.8700
Columns 872 through 884
7.8710 7.8720 7.8730 7.8740 7.8750 7.8760 7.8770 7.8780 ✓
7.8790 7.8800 7.8810 7.8820 7.8830
Columns 885 through 897
7.8840 7.8850 7.8860 7.8870 7.8880 7.8890 7.8900 7.8910 ✓
7.8920 7.8930 7.8940 7.8950 7.8960
Columns 898 through 910
7.8970 7.8980 7.8990 7.9000 7.9010 7.9020 7.9030 7.9040 ✓
7.9050 7.9060 7.9070 7.9080 7.9090
Columns 911 through 923
7.9100 7.9110 7.9120 7.9130 7.9140 7.9150 7.9160 7.9170 ✓
7.9180 7.9190 7.9200 7.9210 7.9220
Columns 924 through 936
7.9230 7.9240 7.9250 7.9260 7.9270 7.9280 7.9290 7.9300 ✓
7.9310 7.9320 7.9330 7.9340 7.9350
Columns 937 through 949
7.9360 7.9370 7.9380 7.9390 7.9400 7.9410 7.9420 7.9430 ✓
7.9440 7.9450 7.9460 7.9470 7.9480
Columns 950 through 962
```

```
7.9490 7.9500 7.9510 7.9520 7.9530 7.9540 7.9550 7.9560 ✓
7.9570 7.9580 7.9590 7.9600 7.9610
Columns 963 through 975
7.9620 7.9630 7.9640 7.9650 7.9660 7.9670 7.9680 7.9690 ✓
7.9700 7.9710 7.9720 7.9730 7.9740
Columns 976 through 988
7.9750 7.9760 7.9770 7.9780 7.9790 7.9800 7.9810 7.9820 ✓
7.9830 7.9840 7.9850 7.9860 7.9870
Columns 989 through 1000
7.9880 7.9890 7.9900 7.9910 7.9920 7.9930 7.9940 7.9950 ✓
7.9960 7.9970 7.9980 7.9990
unipolar_code =
Columns 1 through 23
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 24 through 46
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 47 through 69
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 70 through 92
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 93 through 115
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 116 through 138
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 139 through 161
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 162 through 184
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 185 through 207
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 208 through 230
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 231 through 253
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 254 through 276
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
Columns 277 through 299
1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1 1
```

	Columns 300 through 322														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 323 through 345														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 346 through 368														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 369 through 391														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 392 through 414														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 415 through 437														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 438 through 460														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 461 through 483														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 484 through 506														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 507 through 529														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 530 through 552														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 553 through 575														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 576 through 598														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 599 through 621														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 622 through 644														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 645 through 667														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 668 through 690														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						

[illegible]

	Columns 70 through 92														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 93 through 115														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 116 through 138														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 139 through 161														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 162 through 184														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 185 through 207														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 208 through 230														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 231 through 253														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 254 through 276														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 277 through 299														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 300 through 322														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 323 through 345														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 346 through 368														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 369 through 391														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 392 through 414														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 415 through 437														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						
	Columns 438 through 460														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1						

	Columns 461 through 483														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 484 through 506														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 507 through 529														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 530 through 552														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 553 through 575														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 576 through 598														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 599 through 621														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 622 through 644														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 645 through 667														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 668 through 690														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 691 through 713														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 714 through 736														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 737 through 759														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 760 through 782														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 783 through 805														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 806 through 828														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						
	Columns 829 through 851														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1✓
1	1	1	1	1	1	1	1	1	1						

[illegible]

	Columns 231 through 253														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 254 through 276														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 277 through 299														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 300 through 322														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 323 through 345														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 346 through 368														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 369 through 391														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 392 through 414														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 415 through 437														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 438 through 460														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 461 through 483														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 484 through 506														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 507 through 529														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 530 through 552														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 553 through 575														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 576 through 598														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						
	Columns 599 through 621														
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1						

[illegible]

[illegible]

[illegible]

[illegible]


```
8.0730      8.0740      8.0750      8.0760      8.0770
Columns 79 through 91
      8.0780      8.0790      8.0800      8.0810      8.0820      8.0830      8.0840      8.0850 ✓
8.0860      8.0870      8.0880      8.0890      8.0900
Columns 92 through 104
      8.0910      8.0920      8.0930      8.0940      8.0950      8.0960      8.0970      8.0980 ✓
8.0990      8.1000      8.1010      8.1020      8.1030
Columns 105 through 117
      8.1040      8.1050      8.1060      8.1070      8.1080      8.1090      8.1100      8.1110 ✓
8.1120      8.1130      8.1140      8.1150      8.1160
Columns 118 through 130
      8.1170      8.1180      8.1190      8.1200      8.1210      8.1220      8.1230      8.1240 ✓
8.1250      8.1260      8.1270      8.1280      8.1290
Columns 131 through 143
      8.1300      8.1310      8.1320      8.1330      8.1340      8.1350      8.1360      8.1370 ✓
8.1380      8.1390      8.1400      8.1410      8.1420
Columns 144 through 156
      8.1430      8.1440      8.1450      8.1460      8.1470      8.1480      8.1490      8.1500 ✓
8.1510      8.1520      8.1530      8.1540      8.1550
Columns 157 through 169
      8.1560      8.1570      8.1580      8.1590      8.1600      8.1610      8.1620      8.1630 ✓
8.1640      8.1650      8.1660      8.1670      8.1680
Columns 170 through 182
      8.1690      8.1700      8.1710      8.1720      8.1730      8.1740      8.1750      8.1760 ✓
8.1770      8.1780      8.1790      8.1800      8.1810
Columns 183 through 195
      8.1820      8.1830      8.1840      8.1850      8.1860      8.1870      8.1880      8.1890 ✓
8.1900      8.1910      8.1920      8.1930      8.1940
Columns 196 through 208
      8.1950      8.1960      8.1970      8.1980      8.1990      8.2000      8.2010      8.2020 ✓
8.2030      8.2040      8.2050      8.2060      8.2070
Columns 209 through 221
      8.2080      8.2090      8.2100      8.2110      8.2120      8.2130      8.2140      8.2150 ✓
8.2160      8.2170      8.2180      8.2190      8.2200
Columns 222 through 234
      8.2210      8.2220      8.2230      8.2240      8.2250      8.2260      8.2270      8.2280 ✓
8.2290      8.2300      8.2310      8.2320      8.2330
Columns 235 through 247
      8.2340      8.2350      8.2360      8.2370      8.2380      8.2390      8.2400      8.2410 ✓
8.2420      8.2430      8.2440      8.2450      8.2460
Columns 248 through 260
      8.2470      8.2480      8.2490      8.2500      8.2510      8.2520      8.2530      8.2540 ✓
8.2550      8.2560      8.2570      8.2580      8.2590
Columns 261 through 273
      8.2600      8.2610      8.2620      8.2630      8.2640      8.2650      8.2660      8.2670 ✓
8.2680      8.2690      8.2700      8.2710      8.2720
Columns 274 through 286
      8.2730      8.2740      8.2750      8.2760      8.2770      8.2780      8.2790      8.2800 ✓
8.2810      8.2820      8.2830      8.2840      8.2850
Columns 287 through 299
      8.2860      8.2870      8.2880      8.2890      8.2900      8.2910      8.2920      8.2930 ✓
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8.2940    8.2950    8.2960    8.2970    8.2980
Columns 300 through 312
    8.2990    8.3000    8.3010    8.3020    8.3030    8.3040    8.3050    8.3060 ✓
8.3070    8.3080    8.3090    8.3100    8.3110
Columns 313 through 325
    8.3120    8.3130    8.3140    8.3150    8.3160    8.3170    8.3180    8.3190 ✓
8.3200    8.3210    8.3220    8.3230    8.3240
Columns 326 through 338
    8.3250    8.3260    8.3270    8.3280    8.3290    8.3300    8.3310    8.3320 ✓
8.3330    8.3340    8.3350    8.3360    8.3370
Columns 339 through 351
    8.3380    8.3390    8.3400    8.3410    8.3420    8.3430    8.3440    8.3450 ✓
8.3460    8.3470    8.3480    8.3490    8.3500
Columns 352 through 364
    8.3510    8.3520    8.3530    8.3540    8.3550    8.3560    8.3570    8.3580 ✓
8.3590    8.3600    8.3610    8.3620    8.3630
Columns 365 through 377
    8.3640    8.3650    8.3660    8.3670    8.3680    8.3690    8.3700    8.3710 ✓
8.3720    8.3730    8.3740    8.3750    8.3760
Columns 378 through 390
    8.3770    8.3780    8.3790    8.3800    8.3810    8.3820    8.3830    8.3840 ✓
8.3850    8.3860    8.3870    8.3880    8.3890
Columns 391 through 403
    8.3900    8.3910    8.3920    8.3930    8.3940    8.3950    8.3960    8.3970 ✓
8.3980    8.3990    8.4000    8.4010    8.4020
Columns 404 through 416
    8.4030    8.4040    8.4050    8.4060    8.4070    8.4080    8.4090    8.4100 ✓
8.4110    8.4120    8.4130    8.4140    8.4150
Columns 417 through 429
    8.4160    8.4170    8.4180    8.4190    8.4200    8.4210    8.4220    8.4230 ✓
8.4240    8.4250    8.4260    8.4270    8.4280
Columns 430 through 442
    8.4290    8.4300    8.4310    8.4320    8.4330    8.4340    8.4350    8.4360 ✓
8.4370    8.4380    8.4390    8.4400    8.4410
Columns 443 through 455
    8.4420    8.4430    8.4440    8.4450    8.4460    8.4470    8.4480    8.4490 ✓
8.4500    8.4510    8.4520    8.4530    8.4540
Columns 456 through 468
    8.4550    8.4560    8.4570    8.4580    8.4590    8.4600    8.4610    8.4620 ✓
8.4630    8.4640    8.4650    8.4660    8.4670
Columns 469 through 481
    8.4680    8.4690    8.4700    8.4710    8.4720    8.4730    8.4740    8.4750 ✓
8.4760    8.4770    8.4780    8.4790    8.4800
Columns 482 through 494
    8.4810    8.4820    8.4830    8.4840    8.4850    8.4860    8.4870    8.4880 ✓
8.4890    8.4900    8.4910    8.4920    8.4930
Columns 495 through 507
    8.4940    8.4950    8.4960    8.4970    8.4980    8.4990    8.5000    8.5010 ✓
8.5020    8.5030    8.5040    8.5050    8.5060
Columns 508 through 520
    8.5070    8.5080    8.5090    8.5100    8.5110    8.5120    8.5130    8.5140 ✓

```

```
8.5150    8.5160    8.5170    8.5180    8.5190
Columns 521 through 533
    8.5200    8.5210    8.5220    8.5230    8.5240    8.5250    8.5260    8.5270 ✓
8.5280    8.5290    8.5300    8.5310    8.5320
Columns 534 through 546
    8.5330    8.5340    8.5350    8.5360    8.5370    8.5380    8.5390    8.5400 ✓
8.5410    8.5420    8.5430    8.5440    8.5450
Columns 547 through 559
    8.5460    8.5470    8.5480    8.5490    8.5500    8.5510    8.5520    8.5530 ✓
8.5540    8.5550    8.5560    8.5570    8.5580
Columns 560 through 572
    8.5590    8.5600    8.5610    8.5620    8.5630    8.5640    8.5650    8.5660 ✓
8.5670    8.5680    8.5690    8.5700    8.5710
Columns 573 through 585
    8.5720    8.5730    8.5740    8.5750    8.5760    8.5770    8.5780    8.5790 ✓
8.5800    8.5810    8.5820    8.5830    8.5840
Columns 586 through 598
    8.5850    8.5860    8.5870    8.5880    8.5890    8.5900    8.5910    8.5920 ✓
8.5930    8.5940    8.5950    8.5960    8.5970
Columns 599 through 611
    8.5980    8.5990    8.6000    8.6010    8.6020    8.6030    8.6040    8.6050 ✓
8.6060    8.6070    8.6080    8.6090    8.6100
Columns 612 through 624
    8.6110    8.6120    8.6130    8.6140    8.6150    8.6160    8.6170    8.6180 ✓
8.6190    8.6200    8.6210    8.6220    8.6230
Columns 625 through 637
    8.6240    8.6250    8.6260    8.6270    8.6280    8.6290    8.6300    8.6310 ✓
8.6320    8.6330    8.6340    8.6350    8.6360
Columns 638 through 650
    8.6370    8.6380    8.6390    8.6400    8.6410    8.6420    8.6430    8.6440 ✓
8.6450    8.6460    8.6470    8.6480    8.6490
Columns 651 through 663
    8.6500    8.6510    8.6520    8.6530    8.6540    8.6550    8.6560    8.6570 ✓
8.6580    8.6590    8.6600    8.6610    8.6620
Columns 664 through 676
    8.6630    8.6640    8.6650    8.6660    8.6670    8.6680    8.6690    8.6700 ✓
8.6710    8.6720    8.6730    8.6740    8.6750
Columns 677 through 689
    8.6760    8.6770    8.6780    8.6790    8.6800    8.6810    8.6820    8.6830 ✓
8.6840    8.6850    8.6860    8.6870    8.6880
Columns 690 through 702
    8.6890    8.6900    8.6910    8.6920    8.6930    8.6940    8.6950    8.6960 ✓
8.6970    8.6980    8.6990    8.7000    8.7010
Columns 703 through 715
    8.7020    8.7030    8.7040    8.7050    8.7060    8.7070    8.7080    8.7090 ✓
8.7100    8.7110    8.7120    8.7130    8.7140
Columns 716 through 728
    8.7150    8.7160    8.7170    8.7180    8.7190    8.7200    8.7210    8.7220 ✓
8.7230    8.7240    8.7250    8.7260    8.7270
Columns 729 through 741
    8.7280    8.7290    8.7300    8.7310    8.7320    8.7330    8.7340    8.7350 ✓
```

```
8.7360    8.7370    8.7380    8.7390    8.7400
Columns 742 through 754
    8.7410    8.7420    8.7430    8.7440    8.7450    8.7460    8.7470    8.7480 ✓
8.7490    8.7500    8.7510    8.7520    8.7530
Columns 755 through 767
    8.7540    8.7550    8.7560    8.7570    8.7580    8.7590    8.7600    8.7610 ✓
8.7620    8.7630    8.7640    8.7650    8.7660
Columns 768 through 780
    8.7670    8.7680    8.7690    8.7700    8.7710    8.7720    8.7730    8.7740 ✓
8.7750    8.7760    8.7770    8.7780    8.7790
Columns 781 through 793
    8.7800    8.7810    8.7820    8.7830    8.7840    8.7850    8.7860    8.7870 ✓
8.7880    8.7890    8.7900    8.7910    8.7920
Columns 794 through 806
    8.7930    8.7940    8.7950    8.7960    8.7970    8.7980    8.7990    8.8000 ✓
8.8010    8.8020    8.8030    8.8040    8.8050
Columns 807 through 819
    8.8060    8.8070    8.8080    8.8090    8.8100    8.8110    8.8120    8.8130 ✓
8.8140    8.8150    8.8160    8.8170    8.8180
Columns 820 through 832
    8.8190    8.8200    8.8210    8.8220    8.8230    8.8240    8.8250    8.8260 ✓
8.8270    8.8280    8.8290    8.8300    8.8310
Columns 833 through 845
    8.8320    8.8330    8.8340    8.8350    8.8360    8.8370    8.8380    8.8390 ✓
8.8400    8.8410    8.8420    8.8430    8.8440
Columns 846 through 858
    8.8450    8.8460    8.8470    8.8480    8.8490    8.8500    8.8510    8.8520 ✓
8.8530    8.8540    8.8550    8.8560    8.8570
Columns 859 through 871
    8.8580    8.8590    8.8600    8.8610    8.8620    8.8630    8.8640    8.8650 ✓
8.8660    8.8670    8.8680    8.8690    8.8700
Columns 872 through 884
    8.8710    8.8720    8.8730    8.8740    8.8750    8.8760    8.8770    8.8780 ✓
8.8790    8.8800    8.8810    8.8820    8.8830
Columns 885 through 897
    8.8840    8.8850    8.8860    8.8870    8.8880    8.8890    8.8900    8.8910 ✓
8.8920    8.8930    8.8940    8.8950    8.8960
Columns 898 through 910
    8.8970    8.8980    8.8990    8.9000    8.9010    8.9020    8.9030    8.9040 ✓
8.9050    8.9060    8.9070    8.9080    8.9090
Columns 911 through 923
    8.9100    8.9110    8.9120    8.9130    8.9140    8.9150    8.9160    8.9170 ✓
8.9180    8.9190    8.9200    8.9210    8.9220
Columns 924 through 936
    8.9230    8.9240    8.9250    8.9260    8.9270    8.9280    8.9290    8.9300 ✓
8.9310    8.9320    8.9330    8.9340    8.9350
Columns 937 through 949
    8.9360    8.9370    8.9380    8.9390    8.9400    8.9410    8.9420    8.9430 ✓
8.9440    8.9450    8.9460    8.9470    8.9480
Columns 950 through 962
    8.9490    8.9500    8.9510    8.9520    8.9530    8.9540    8.9550    8.9560 ✓
```

```
8.9570    8.9580    8.9590    8.9600    8.9610
Columns 963 through 975
    8.9620    8.9630    8.9640    8.9650    8.9660    8.9670    8.9680    8.9690 ✓
8.9700    8.9710    8.9720    8.9730    8.9740
Columns 976 through 988
    8.9750    8.9760    8.9770    8.9780    8.9790    8.9800    8.9810    8.9820 ✓
8.9830    8.9840    8.9850    8.9860    8.9870
Columns 989 through 1000
    8.9880    8.9890    8.9900    8.9910    8.9920    8.9930    8.9940    8.9950 ✓
8.9960    8.9970    8.9980    8.9990
unipolar_code =
Columns 1 through 23
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 24 through 46
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 47 through 69
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 70 through 92
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 93 through 115
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 116 through 138
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 139 through 161
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 162 through 184
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 185 through 207
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 208 through 230
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 231 through 253
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 254 through 276
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 277 through 299
    1    1    1    1    1    1    1    1    1    1    1    1    1    1 ✓
1    1    1    1    1    1    1    1    1    1
Columns 300 through 322
```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 254 through 276  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 277 through 299  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 300 through 322  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 323 through 345  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 346 through 368  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 369 through 391  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 392 through 414  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 415 through 437  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 438 through 460  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 461 through 483  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 484 through 506  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 507 through 529  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 530 through 552  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 553 through 575  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 576 through 598  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 599 through 621  
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓  
-1 -1 -1 -1 -1 -1 -1 -1 -1  
Columns 622 through 644
```

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 645 through 667
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 668 through 690
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 691 through 713
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 714 through 736
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 737 through 759
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 760 through 782
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 783 through 805
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 806 through 828
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 829 through 851
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 852 through 874
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 875 through 897
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 898 through 920
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 921 through 943
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 944 through 966
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 967 through 989
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 990 through 1000
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
sign =
1
```

[illegible]

-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 392 through 414														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 415 through 437														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 438 through 460														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 461 through 483														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
Columns 484 through 506														
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1 ✓
-1	-1	-1	1	1	1	1	1	1	1					
Columns 507 through 529														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 530 through 552														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 553 through 575														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 576 through 598														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 599 through 621														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 622 through 644														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 645 through 667														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 668 through 690														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 691 through 713														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 714 through 736														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1	1	1	1	1	1					
Columns 737 through 759														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 ✓
1	1	1	1	1</										

```

1      1      1      1      1      1      1      1      1
Columns 783 through 805
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 806 through 828
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 829 through 851
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 852 through 874
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 875 through 897
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 898 through 920
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 921 through 943
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 944 through 966
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 967 through 989
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
Columns 990 through 1000
      1      1      1      1      1      1      1      1      1      1      1      1      1      1 ✓
i =
     9
t =
Columns 1 through 13
  9.0000    9.0010    9.0020    9.0030    9.0040    9.0050    9.0060    9.0070 ✓
9.0080    9.0090    9.0100    9.0110    9.0120
Columns 14 through 26
  9.0130    9.0140    9.0150    9.0160    9.0170    9.0180    9.0190    9.0200 ✓
9.0210    9.0220    9.0230    9.0240    9.0250
Columns 27 through 39
  9.0260    9.0270    9.0280    9.0290    9.0300    9.0310    9.0320    9.0330 ✓
9.0340    9.0350    9.0360    9.0370    9.0380
Columns 40 through 52
  9.0390    9.0400    9.0410    9.0420    9.0430    9.0440    9.0450    9.0460 ✓
9.0470    9.0480    9.0490    9.0500    9.0510
Columns 53 through 65
  9.0520    9.0530    9.0540    9.0550    9.0560    9.0570    9.0580    9.0590 ✓
9.0600    9.0610    9.0620    9.0630    9.0640
Columns 66 through 78
  9.0650    9.0660    9.0670    9.0680    9.0690    9.0700    9.0710    9.0720 ✓
9.0730    9.0740    9.0750    9.0760    9.0770

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Columns 79 through 91
  9.0780    9.0790    9.0800    9.0810    9.0820    9.0830    9.0840    9.0850 ✓
9.0860    9.0870    9.0880    9.0890    9.0900
Columns 92 through 104
  9.0910    9.0920    9.0930    9.0940    9.0950    9.0960    9.0970    9.0980 ✓
9.0990    9.1000    9.1010    9.1020    9.1030
Columns 105 through 117
  9.1040    9.1050    9.1060    9.1070    9.1080    9.1090    9.1100    9.1110 ✓
9.1120    9.1130    9.1140    9.1150    9.1160
Columns 118 through 130
  9.1170    9.1180    9.1190    9.1200    9.1210    9.1220    9.1230    9.1240 ✓
9.1250    9.1260    9.1270    9.1280    9.1290
Columns 131 through 143
  9.1300    9.1310    9.1320    9.1330    9.1340    9.1350    9.1360    9.1370 ✓
9.1380    9.1390    9.1400    9.1410    9.1420
Columns 144 through 156
  9.1430    9.1440    9.1450    9.1460    9.1470    9.1480    9.1490    9.1500 ✓
9.1510    9.1520    9.1530    9.1540    9.1550
Columns 157 through 169
  9.1560    9.1570    9.1580    9.1590    9.1600    9.1610    9.1620    9.1630 ✓
9.1640    9.1650    9.1660    9.1670    9.1680
Columns 170 through 182
  9.1690    9.1700    9.1710    9.1720    9.1730    9.1740    9.1750    9.1760 ✓
9.1770    9.1780    9.1790    9.1800    9.1810
Columns 183 through 195
  9.1820    9.1830    9.1840    9.1850    9.1860    9.1870    9.1880    9.1890 ✓
9.1900    9.1910    9.1920    9.1930    9.1940
Columns 196 through 208
  9.1950    9.1960    9.1970    9.1980    9.1990    9.2000    9.2010    9.2020 ✓
9.2030    9.2040    9.2050    9.2060    9.2070
Columns 209 through 221
  9.2080    9.2090    9.2100    9.2110    9.2120    9.2130    9.2140    9.2150 ✓
9.2160    9.2170    9.2180    9.2190    9.2200
Columns 222 through 234
  9.2210    9.2220    9.2230    9.2240    9.2250    9.2260    9.2270    9.2280 ✓
9.2290    9.2300    9.2310    9.2320    9.2330
Columns 235 through 247
  9.2340    9.2350    9.2360    9.2370    9.2380    9.2390    9.2400    9.2410 ✓
9.2420    9.2430    9.2440    9.2450    9.2460
Columns 248 through 260
  9.2470    9.2480    9.2490    9.2500    9.2510    9.2520    9.2530    9.2540 ✓
9.2550    9.2560    9.2570    9.2580    9.2590
Columns 261 through 273
  9.2600    9.2610    9.2620    9.2630    9.2640    9.2650    9.2660    9.2670 ✓
9.2680    9.2690    9.2700    9.2710    9.2720
Columns 274 through 286
  9.2730    9.2740    9.2750    9.2760    9.2770    9.2780    9.2790    9.2800 ✓
9.2810    9.2820    9.2830    9.2840    9.2850
Columns 287 through 299
  9.2860    9.2870    9.2880    9.2890    9.2900    9.2910    9.2920    9.2930 ✓
9.2940    9.2950    9.2960    9.2970    9.2980
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Columns 300 through 312
  9.2990    9.3000    9.3010    9.3020    9.3030    9.3040    9.3050    9.3060 ✓
9.3070    9.3080    9.3090    9.3100    9.3110
Columns 313 through 325
  9.3120    9.3130    9.3140    9.3150    9.3160    9.3170    9.3180    9.3190 ✓
9.3200    9.3210    9.3220    9.3230    9.3240
Columns 326 through 338
  9.3250    9.3260    9.3270    9.3280    9.3290    9.3300    9.3310    9.3320 ✓
9.3330    9.3340    9.3350    9.3360    9.3370
Columns 339 through 351
  9.3380    9.3390    9.3400    9.3410    9.3420    9.3430    9.3440    9.3450 ✓
9.3460    9.3470    9.3480    9.3490    9.3500
Columns 352 through 364
  9.3510    9.3520    9.3530    9.3540    9.3550    9.3560    9.3570    9.3580 ✓
9.3590    9.3600    9.3610    9.3620    9.3630
Columns 365 through 377
  9.3640    9.3650    9.3660    9.3670    9.3680    9.3690    9.3700    9.3710 ✓
9.3720    9.3730    9.3740    9.3750    9.3760
Columns 378 through 390
  9.3770    9.3780    9.3790    9.3800    9.3810    9.3820    9.3830    9.3840 ✓
9.3850    9.3860    9.3870    9.3880    9.3890
Columns 391 through 403
  9.3900    9.3910    9.3920    9.3930    9.3940    9.3950    9.3960    9.3970 ✓
9.3980    9.3990    9.4000    9.4010    9.4020
Columns 404 through 416
  9.4030    9.4040    9.4050    9.4060    9.4070    9.4080    9.4090    9.4100 ✓
9.4110    9.4120    9.4130    9.4140    9.4150
Columns 417 through 429
  9.4160    9.4170    9.4180    9.4190    9.4200    9.4210    9.4220    9.4230 ✓
9.4240    9.4250    9.4260    9.4270    9.4280
Columns 430 through 442
  9.4290    9.4300    9.4310    9.4320    9.4330    9.4340    9.4350    9.4360 ✓
9.4370    9.4380    9.4390    9.4400    9.4410
Columns 443 through 455
  9.4420    9.4430    9.4440    9.4450    9.4460    9.4470    9.4480    9.4490 ✓
9.4500    9.4510    9.4520    9.4530    9.4540
Columns 456 through 468
  9.4550    9.4560    9.4570    9.4580    9.4590    9.4600    9.4610    9.4620 ✓
9.4630    9.4640    9.4650    9.4660    9.4670
Columns 469 through 481
  9.4680    9.4690    9.4700    9.4710    9.4720    9.4730    9.4740    9.4750 ✓
9.4760    9.4770    9.4780    9.4790    9.4800
Columns 482 through 494
  9.4810    9.4820    9.4830    9.4840    9.4850    9.4860    9.4870    9.4880 ✓
9.4890    9.4900    9.4910    9.4920    9.4930
Columns 495 through 507
  9.4940    9.4950    9.4960    9.4970    9.4980    9.4990    9.5000    9.5010 ✓
9.5020    9.5030    9.5040    9.5050    9.5060
Columns 508 through 520
  9.5070    9.5080    9.5090    9.5100    9.5110    9.5120    9.5130    9.5140 ✓
9.5150    9.5160    9.5170    9.5180    9.5190
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Columns 521 through 533
  9.5200    9.5210    9.5220    9.5230    9.5240    9.5250    9.5260    9.5270 ✓
9.5280    9.5290    9.5300    9.5310    9.5320
Columns 534 through 546
  9.5330    9.5340    9.5350    9.5360    9.5370    9.5380    9.5390    9.5400 ✓
9.5410    9.5420    9.5430    9.5440    9.5450
Columns 547 through 559
  9.5460    9.5470    9.5480    9.5490    9.5500    9.5510    9.5520    9.5530 ✓
9.5540    9.5550    9.5560    9.5570    9.5580
Columns 560 through 572
  9.5590    9.5600    9.5610    9.5620    9.5630    9.5640    9.5650    9.5660 ✓
9.5670    9.5680    9.5690    9.5700    9.5710
Columns 573 through 585
  9.5720    9.5730    9.5740    9.5750    9.5760    9.5770    9.5780    9.5790 ✓
9.5800    9.5810    9.5820    9.5830    9.5840
Columns 586 through 598
  9.5850    9.5860    9.5870    9.5880    9.5890    9.5900    9.5910    9.5920 ✓
9.5930    9.5940    9.5950    9.5960    9.5970
Columns 599 through 611
  9.5980    9.5990    9.6000    9.6010    9.6020    9.6030    9.6040    9.6050 ✓
9.6060    9.6070    9.6080    9.6090    9.6100
Columns 612 through 624
  9.6110    9.6120    9.6130    9.6140    9.6150    9.6160    9.6170    9.6180 ✓
9.6190    9.6200    9.6210    9.6220    9.6230
Columns 625 through 637
  9.6240    9.6250    9.6260    9.6270    9.6280    9.6290    9.6300    9.6310 ✓
9.6320    9.6330    9.6340    9.6350    9.6360
Columns 638 through 650
  9.6370    9.6380    9.6390    9.6400    9.6410    9.6420    9.6430    9.6440 ✓
9.6450    9.6460    9.6470    9.6480    9.6490
Columns 651 through 663
  9.6500    9.6510    9.6520    9.6530    9.6540    9.6550    9.6560    9.6570 ✓
9.6580    9.6590    9.6600    9.6610    9.6620
Columns 664 through 676
  9.6630    9.6640    9.6650    9.6660    9.6670    9.6680    9.6690    9.6700 ✓
9.6710    9.6720    9.6730    9.6740    9.6750
Columns 677 through 689
  9.6760    9.6770    9.6780    9.6790    9.6800    9.6810    9.6820    9.6830 ✓
9.6840    9.6850    9.6860    9.6870    9.6880
Columns 690 through 702
  9.6890    9.6900    9.6910    9.6920    9.6930    9.6940    9.6950    9.6960 ✓
9.6970    9.6980    9.6990    9.7000    9.7010
Columns 703 through 715
  9.7020    9.7030    9.7040    9.7050    9.7060    9.7070    9.7080    9.7090 ✓
9.7100    9.7110    9.7120    9.7130    9.7140
Columns 716 through 728
  9.7150    9.7160    9.7170    9.7180    9.7190    9.7200    9.7210    9.7220 ✓
9.7230    9.7240    9.7250    9.7260    9.7270
Columns 729 through 741
  9.7280    9.7290    9.7300    9.7310    9.7320    9.7330    9.7340    9.7350 ✓
9.7360    9.7370    9.7380    9.7390    9.7400
```

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Columns 742 through 754
  9.7410    9.7420    9.7430    9.7440    9.7450    9.7460    9.7470    9.7480 ✓
9.7490    9.7500    9.7510    9.7520    9.7530
Columns 755 through 767
  9.7540    9.7550    9.7560    9.7570    9.7580    9.7590    9.7600    9.7610 ✓
9.7620    9.7630    9.7640    9.7650    9.7660
Columns 768 through 780
  9.7670    9.7680    9.7690    9.7700    9.7710    9.7720    9.7730    9.7740 ✓
9.7750    9.7760    9.7770    9.7780    9.7790
Columns 781 through 793
  9.7800    9.7810    9.7820    9.7830    9.7840    9.7850    9.7860    9.7870 ✓
9.7880    9.7890    9.7900    9.7910    9.7920
Columns 794 through 806
  9.7930    9.7940    9.7950    9.7960    9.7970    9.7980    9.7990    9.8000 ✓
9.8010    9.8020    9.8030    9.8040    9.8050
Columns 807 through 819
  9.8060    9.8070    9.8080    9.8090    9.8100    9.8110    9.8120    9.8130 ✓
9.8140    9.8150    9.8160    9.8170    9.8180
Columns 820 through 832
  9.8190    9.8200    9.8210    9.8220    9.8230    9.8240    9.8250    9.8260 ✓
9.8270    9.8280    9.8290    9.8300    9.8310
Columns 833 through 845
  9.8320    9.8330    9.8340    9.8350    9.8360    9.8370    9.8380    9.8390 ✓
9.8400    9.8410    9.8420    9.8430    9.8440
Columns 846 through 858
  9.8450    9.8460    9.8470    9.8480    9.8490    9.8500    9.8510    9.8520 ✓
9.8530    9.8540    9.8550    9.8560    9.8570
Columns 859 through 871
  9.8580    9.8590    9.8600    9.8610    9.8620    9.8630    9.8640    9.8650 ✓
9.8660    9.8670    9.8680    9.8690    9.8700
Columns 872 through 884
  9.8710    9.8720    9.8730    9.8740    9.8750    9.8760    9.8770    9.8780 ✓
9.8790    9.8800    9.8810    9.8820    9.8830
Columns 885 through 897
  9.8840    9.8850    9.8860    9.8870    9.8880    9.8890    9.8900    9.8910 ✓
9.8920    9.8930    9.8940    9.8950    9.8960
Columns 898 through 910
  9.8970    9.8980    9.8990    9.9000    9.9010    9.9020    9.9030    9.9040 ✓
9.9050    9.9060    9.9070    9.9080    9.9090
Columns 911 through 923
  9.9100    9.9110    9.9120    9.9130    9.9140    9.9150    9.9160    9.9170 ✓
9.9180    9.9190    9.9200    9.9210    9.9220
Columns 924 through 936
  9.9230    9.9240    9.9250    9.9260    9.9270    9.9280    9.9290    9.9300 ✓
9.9310    9.9320    9.9330    9.9340    9.9350
Columns 937 through 949
  9.9360    9.9370    9.9380    9.9390    9.9400    9.9410    9.9420    9.9430 ✓
9.9440    9.9450    9.9460    9.9470    9.9480
Columns 950 through 962
  9.9490    9.9500    9.9510    9.9520    9.9530    9.9540    9.9550    9.9560 ✓
9.9570    9.9580    9.9590    9.9600    9.9610
```

```
Columns 963 through 975
    9.9620    9.9630    9.9640    9.9650    9.9660    9.9670    9.9680    9.9690 ✓
9.9700    9.9710    9.9720    9.9730    9.9740
Columns 976 through 988
    9.9750    9.9760    9.9770    9.9780    9.9790    9.9800    9.9810    9.9820 ✓
9.9830    9.9840    9.9850    9.9860    9.9870
Columns 989 through 1000
    9.9880    9.9890    9.9900    9.9910    9.9920    9.9930    9.9940    9.9950 ✓
9.9960    9.9970    9.9980    9.9990
unipolar_code =
    0
polar_code =
Columns 1 through 23
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 24 through 46
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 47 through 69
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 70 through 92
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 93 through 115
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 116 through 138
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 139 through 161
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 162 through 184
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 185 through 207
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 208 through 230
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 231 through 253
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 254 through 276
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
Columns 277 through 299
    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1    -1 ✓
-1    -1    -1    -1    -1    -1    -1    -1    -1
```

Columns 300 through 322	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 323 through 345	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 346 through 368	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 369 through 391	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 392 through 414	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 415 through 437	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 438 through 460	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 461 through 483	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 484 through 506	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 507 through 529	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 530 through 552	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 553 through 575	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 576 through 598	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 599 through 621	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 622 through 644	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 645 through 667	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						
Columns 668 through 690	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	✓
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1						

```

Columns 691 through 713
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 714 through 736
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 737 through 759
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 760 through 782
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 783 through 805
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 806 through 828
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 829 through 851
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 852 through 874
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 875 through 897
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 898 through 920
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 921 through 943
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 944 through 966
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 967 through 989
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 ✓
-1 -1 -1 -1 -1 -1 -1 -1 -1
Columns 990 through 1000
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
bipolar_code =
0
manchester_code =
Columns 1 through 23
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 24 through 46
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ✓
1 1 1 1 1 1 1 1
Columns 47 through 69

```

[illegible]

[illegible]

[illegible]