
Test script (Question-1)

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Function to Test V_DSB()

test_vdsb() is the function to test V_DSB() for values of $A=1$, $\text{PHIc}=\pi/2$, $A_m=2$, $1, 0.5$, $f_c=1\text{kHz}$, $f_m=10\text{hz}$

```
function [v1,v3,v5]=test_vdsb() % Function to test vdsb

    T=-0.09:0.0001:0.09; % Time axis
    W=-1200:1:1200; % feq axis
```

Calling V_DSB()

```
[v1,v2]=V_DSB(1000,10,pi/2,1,2,T,W);
[v3,v4]=V_DSB(1000,10,pi/2,1,1,T,W);
[v5,v6]=V_DSB(1000,10,pi/2,1,0.5,T,W);
```

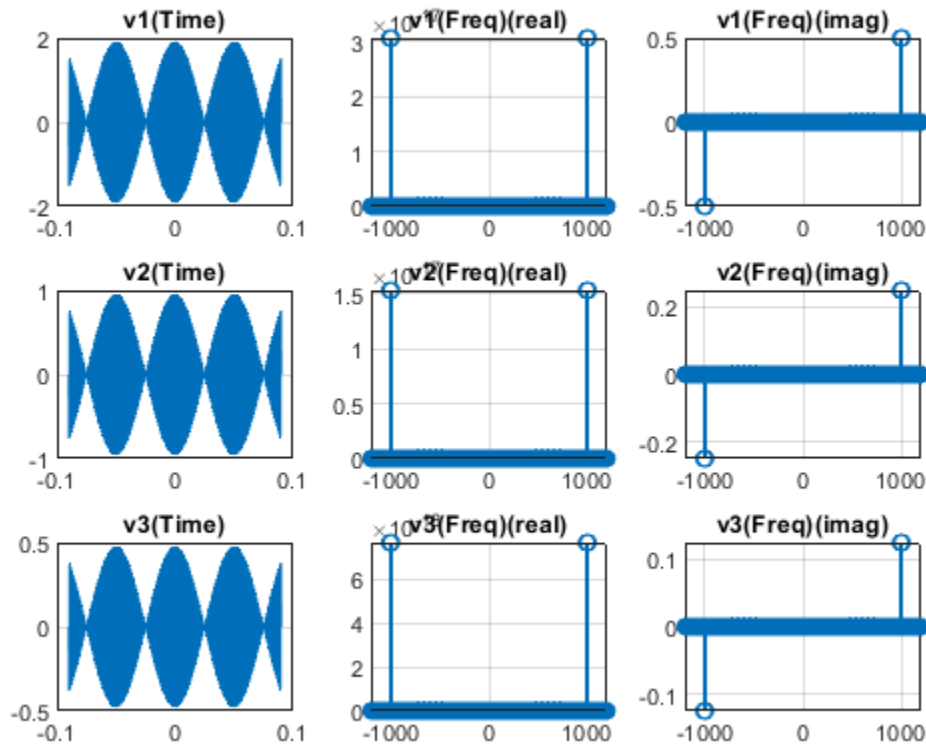
Ploting signals

```
figure('Name','V_DSB outputs');
subplot(3,3,1);
plot(T,v1);
title("v1(Time)"); % v1 in time domain
grid;
subplot(3,3,2);
stem(W,real(v2));
title("v1(Freq)(real)"); % v1 in frq domain (real part)
grid;
subplot(3,3,3);
stem(W,imag(v2));
title("v1(Freq)(imag)"); % v1 in frq domain (imaginary part)
grid;
subplot(3,3,4);
plot(T,v3);
title("v2(Time)"); % v2 in time domain
grid;
subplot(3,3,5);
stem(W,real(v4));
title("v2(Freq)(real)"); % v2 in frq domain (real part)
grid;
subplot(3,3,6);
```

```

stem(W,imag(v4));
title("v2(Freq)(imag)"); % v2 in frq domain (imaginary part)
grid;
subplot(3,3,7);
plot(T,v5);
title("v3(Time)"); % v3 in time domain
grid;
subplot(3,3,8);
stem(W,real(v6));
title("v3(Freq)(real)"); % v3 in frq domain (real part)
grid;
subplot(3,3,9);
stem(W,imag(v6));
title("v3(Freq)(imag)"); % v3 in frq domain (imaginary part)
grid;

```



end

V_DSB function

concept-> message wave(m_w)= $A_m \cos(2\pi f_m t)$; carrier wave(c_w)= $\cos((2\pi f_c t) + \text{PHI}_c)$; V_dsb in time(v_t)= $A \cdot m_w \cdot c_w$; For freq domain it is just F.T of v_t

```

function [vt,vf]=V_DSB(fc,fm,PHIc,A,Am,t,f)
    vt=A*Am*cos(2*pi*fm.*t).*cos((2*pi*fc.*t)+PHIc); % This is our vdsb signal
    in Time domain

```

```

vf=A*Am*(1/4).*(exp(1i*PHIc).*(D_D(f,(fc-fm))+D_D(f,(fc
+fm)))+exp(-1i*PHIc).*(D_D(f,(-fc-fm))+D_D(f,(-fc+fm))));% This is ous vdsb
signal in Freq domain
end

```

Dirac delta function

```

function vf=D_D(f,fx)
% fx is the point at which d_d is to be plotted
vf=zeros(size(f));
if(ismember(fx,f)) % if fx is in f
    vf(fx+1-f(1))=1; % at point fx vf=1
end
end

```

ans =

Columns 1 through 7

-0.0000	-0.9467	-1.5247	-1.5175	-0.9334	0.0000	0.9243
---------	---------	---------	---------	---------	--------	--------

Columns 8 through 14

1.4882	1.4807	0.9105	-0.0000	-0.9011	-1.4503	-1.4425
--------	--------	--------	---------	---------	---------	---------

Columns 15 through 21

-0.8867	0.0000	0.8769	1.4109	1.4028	0.8620	-0.0000
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Columns 22 through 28

-0.8519	-1.3701	-1.3618	-0.8365	0.0000	0.8260	1.3280
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Columns 29 through 35

1.3194	0.8101	-0.0000	-0.7993	-1.2846	-1.2757	-0.7829
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Columns 36 through 42

0.0000	0.7719	1.2399	1.2308	0.7550	-0.0000	-0.7436
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Columns 43 through 49

-1.1939	-1.1846	-0.7263	0.0000	0.7147	1.1468	1.1373
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Columns 50 through 56

0.6969	-0.0000	-0.6850	-1.0986	-1.0888	-0.6669	0.0000
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Columns 57 through 63

0.6546	1.0493	1.0393	0.6361	-0.0000	-0.6237	-0.9989
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Columns 64 through 70

-0.9888 -0.6048 0.0000 0.5920 0.9476 0.9372 0.5728

Columns 71 through 77

-0.0000 -0.5599 -0.8953 -0.8848 -0.5403 0.0000 0.5271

Columns 78 through 84

0.8422 0.8314 0.5072 -0.0000 -0.4938 -0.7882 -0.7773

Columns 85 through 91

-0.4736 0.0000 0.4601 0.7334 0.7224 0.4396 -0.0000

Columns 92 through 98

-0.4259 -0.6779 -0.6668 -0.4052 0.0000 0.3913 0.6218

Columns 99 through 105

0.6105 0.3703 -0.0000 -0.3562 -0.5650 -0.5536 -0.3351

Columns 106 through 112

0.0000 0.3209 0.5077 0.4962 0.2995 -0.0000 -0.2852

Columns 113 through 119

-0.4498 -0.4382 -0.2636 0.0000 0.2492 0.3916 0.3799

Columns 120 through 126

0.2275 -0.0000 -0.2130 -0.3329 -0.3211 -0.1912 0.0000

Columns 127 through 133

0.1766 0.2739 0.2621 0.1547 -0.0000 -0.1400 -0.2147

Columns 134 through 140

-0.2028 -0.1180 0.0000 0.1033 0.1552 0.1433 0.0812

Columns 141 through 147

-0.0000 -0.0664 -0.0956 -0.0836 -0.0443 0.0000 0.0295

Columns 148 through 154

0.0359 0.0239 0.0074 0.0000 0.0074 0.0239 0.0359

Columns 155 through 161

0.0295 -0.0000 -0.0443 -0.0836 -0.0956 -0.0664 0.0000

Columns 162 through 168

0.0812 0.1433 0.1552 0.1033 -0.0000 -0.1180 -0.2028

Columns 169 through 175

-0.2147 -0.1400 0.0000 0.1547 0.2621 0.2739 0.1766

Columns 176 through 182

-0.0000 -0.1912 -0.3211 -0.3329 -0.2130 0.0000 0.2275

Columns 183 through 189

0.3799 0.3916 0.2492 -0.0000 -0.2636 -0.4382 -0.4498

Columns 190 through 196

-0.2852 0.0000 0.2995 0.4962 0.5077 0.3209 -0.0000

Columns 197 through 203

-0.3351 -0.5536 -0.5650 -0.3562 0.0000 0.3703 0.6105

Columns 204 through 210

0.6218 0.3913 -0.0000 -0.4052 -0.6668 -0.6779 -0.4259

Columns 211 through 217

0.0000 0.4396 0.7224 0.7334 0.4601 -0.0000 -0.4736

Columns 218 through 224

-0.7773 -0.7882 -0.4938 0.0000 0.5072 0.8314 0.8422

Columns 225 through 231

0.5271 -0.0000 -0.5403 -0.8848 -0.8953 -0.5599 0.0000

Columns 232 through 238

0.5728 0.9372 0.9476 0.5920 -0.0000 -0.6048 -0.9888

Columns 239 through 245

-0.9989 -0.6237 -0.0000 0.6361 1.0393 1.0493 0.6546

Columns 246 through 252

-0.0000 -0.6669 -1.0888 -1.0986 -0.6850 0.0000 0.6969

Columns 253 through 259

1.1373	1.1468	0.7147	-0.0000	-0.7263	-1.1846	-1.1939
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Columns 260 through 266

-0.7436	0.0000	0.7550	1.2308	1.2399	0.7719	-0.0000
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Columns 267 through 273

-0.7829	-1.2757	-1.2846	-0.7993	0.0000	0.8101	1.3194
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Columns 274 through 280

1.3280	0.8260	-0.0000	-0.8365	-1.3618	-1.3701	-0.8519
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Columns 281 through 287

0.0000	0.8620	1.4028	1.4109	0.8769	-0.0000	-0.8867
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Columns 288 through 294

-1.4425	-1.4503	-0.9011	0.0000	0.9105	1.4807	1.4882
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Columns 295 through 301

0.9243	-0.0000	-0.9334	-1.5175	-1.5247	-0.9467	0.0000
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Columns 302 through 308

0.9554	1.5528	1.5596	0.9681	-0.0000	-0.9764	-1.5865
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Columns 309 through 315

-1.5931	-0.9886	0.0000	0.9965	1.6187	1.6249	1.0081
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Columns 316 through 322

-0.0000	-1.0156	-1.6493	-1.6552	-1.0266	0.0000	1.0337
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Columns 323 through 329

1.6782	1.6838	1.0441	-0.0000	-1.0508	-1.7055	-1.7108
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Columns 330 through 336

-1.0605	0.0000	1.0668	1.7311	1.7360	1.0759	-0.0000
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Columns 337 through 343

-1.0818	-1.7550	-1.7596	-1.0903	0.0000	1.0957	1.7772
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Columns 344 through 350

1.7814 1.1035 -0.0000 -1.1086 -1.7976 -1.8015 -1.1157

Columns 351 through 357

0.0000 1.1203 1.8163 1.8198 1.1268 -0.0000 -1.1309

Columns 358 through 364

-1.8331 -1.8363 -1.1368 0.0000 1.1405 1.8482 1.8509

Columns 365 through 371

1.1456 -0.0000 -1.1488 -1.8614 -1.8638 -1.1533 0.0000

Columns 372 through 378

1.1561 1.8728 1.8748 1.1599 -0.0000 -1.1622 -1.8823

Columns 379 through 385

-1.8840 -1.1654 0.0000 1.1672 1.8900 1.8913 1.1696

Columns 386 through 392

-0.0000 -1.1710 -1.8958 -1.8967 -1.1728 0.0000 1.1737

Columns 393 through 399

1.8997 1.9003 1.1747 -0.0000 -1.1752 -1.9018 -1.9020

Columns 400 through 406

-1.1755 0.0000 1.1755 1.9020 1.9018 1.1752 -0.0000

Columns 407 through 413

-1.1747 -1.9003 -1.8997 -1.1737 0.0000 1.1728 1.8967

Columns 414 through 420

1.8958 1.1710 -0.0000 -1.1696 -1.8913 -1.8900 -1.1672

Columns 421 through 427

0.0000 1.1654 1.8840 1.8823 1.1622 -0.0000 -1.1599

Columns 428 through 434

-1.8748 -1.8728 -1.1561 0.0000 1.1533 1.8638 1.8614

Columns 435 through 441

1.1488 -0.0000 -1.1456 -1.8509 -1.8482 -1.1405 0.0000

Columns 442 through 448

1.1368	1.8363	1.8331	1.1309	-0.0000	-1.1268	-1.8198
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Columns 449 through 455

-1.8163	-1.1203	0.0000	1.1157	1.8015	1.7976	1.1086
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Columns 456 through 462

-0.0000	-1.1035	-1.7814	-1.7772	-1.0957	0.0000	1.0903
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Columns 463 through 469

1.7596	1.7550	1.0818	-0.0000	-1.0759	-1.7360	-1.7311
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Columns 470 through 476

-1.0668	0.0000	1.0605	1.7108	1.7055	1.0508	-0.0000
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Columns 477 through 483

-1.0441	-1.6838	-1.6782	-1.0337	0.0000	1.0266	1.6552
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Columns 484 through 490

1.6493	1.0156	-0.0000	-1.0081	-1.6249	-1.6187	-0.9965
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Columns 491 through 497

0.0000	0.9886	1.5931	1.5865	0.9764	-0.0000	-0.9681
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Columns 498 through 504

-1.5596	-1.5528	-0.9554	0.0000	0.9467	1.5247	1.5175
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Columns 505 through 511

0.9334	-0.0000	-0.9243	-1.4882	-1.4807	-0.9105	0.0000
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Columns 512 through 518

0.9011	1.4503	1.4425	0.8867	-0.0000	-0.8769	-1.4109
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Columns 519 through 525

-1.4028	-0.8620	0.0000	0.8519	1.3701	1.3618	0.8365
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Columns 526 through 532

-0.0000	-0.8260	-1.3280	-1.3194	-0.8101	0.0000	0.7993
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Columns 533 through 539

1.2846 1.2757 0.7829 -0.0000 -0.7719 -1.2399 -1.2308

Columns 540 through 546

-0.7550 0.0000 0.7436 1.1939 1.1846 0.7263 -0.0000

Columns 547 through 553

-0.7147 -1.1468 -1.1373 -0.6969 0.0000 0.6850 1.0986

Columns 554 through 560

1.0888 0.6669 -0.0000 -0.6546 -1.0493 -1.0393 -0.6361

Columns 561 through 567

0.0000 0.6237 0.9989 0.9888 0.6048 -0.0000 -0.5920

Columns 568 through 574

-0.9476 -0.9372 -0.5728 0.0000 0.5599 0.8953 0.8848

Columns 575 through 581

0.5403 -0.0000 -0.5271 -0.8422 -0.8314 -0.5072 0.0000

Columns 582 through 588

0.4938 0.7882 0.7773 0.4736 -0.0000 -0.4601 -0.7334

Columns 589 through 595

-0.7224 -0.4396 0.0000 0.4259 0.6779 0.6668 0.4052

Columns 596 through 602

-0.0000 -0.3913 -0.6218 -0.6105 -0.3703 0.0000 0.3562

Columns 603 through 609

0.5650 0.5536 0.3351 -0.0000 -0.3209 -0.5077 -0.4962

Columns 610 through 616

-0.2995 0.0000 0.2852 0.4498 0.4382 0.2636 -0.0000

Columns 617 through 623

-0.2492 -0.3916 -0.3799 -0.2275 0.0000 0.2130 0.3329

Columns 624 through 630

0.3211 0.1912 -0.0000 -0.1766 -0.2739 -0.2621 -0.1547

Columns 631 through 637

0.0000	0.1400	0.2147	0.2028	0.1180	-0.0000	-0.1033
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Columns 638 through 644

-0.1552	-0.1433	-0.0812	0.0000	0.0664	0.0956	0.0836
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Columns 645 through 651

0.0443	-0.0000	-0.0295	-0.0359	-0.0239	-0.0074	-0.0000
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Columns 652 through 658

-0.0074	-0.0239	-0.0359	-0.0295	0.0000	0.0443	0.0836
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Columns 659 through 665

0.0956	0.0664	-0.0000	-0.0812	-0.1433	-0.1552	-0.1033
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Columns 666 through 672

0.0000	0.1180	0.2028	0.2147	0.1400	-0.0000	-0.1547
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Columns 673 through 679

-0.2621	-0.2739	-0.1766	0.0000	0.1912	0.3211	0.3329
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Columns 680 through 686

0.2130	-0.0000	-0.2275	-0.3799	-0.3916	-0.2492	0.0000
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Columns 687 through 693

0.2636	0.4382	0.4498	0.2852	-0.0000	-0.2995	-0.4962
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Columns 694 through 700

-0.5077	-0.3209	0.0000	0.3351	0.5536	0.5650	0.3562
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Columns 701 through 707

-0.0000	-0.3703	-0.6105	-0.6218	-0.3913	0.0000	0.4052
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Columns 708 through 714

0.6668	0.6779	0.4259	-0.0000	-0.4396	-0.7224	-0.7334
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Columns 715 through 721

-0.4601	0.0000	0.4736	0.7773	0.7882	0.4938	-0.0000
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Columns 722 through 728

-0.5072 -0.8314 -0.8422 -0.5271 0.0000 0.5403 0.8848

Columns 729 through 735

0.8953 0.5599 -0.0000 -0.5728 -0.9372 -0.9476 -0.5920

Columns 736 through 742

0.0000 0.6048 0.9888 0.9989 0.6237 -0.0000 -0.6361

Columns 743 through 749

-1.0393 -1.0493 -0.6546 0.0000 0.6669 1.0888 1.0986

Columns 750 through 756

0.6850 -0.0000 -0.6969 -1.1373 -1.1468 -0.7147 0.0000

Columns 757 through 763

0.7263 1.1846 1.1939 0.7436 -0.0000 -0.7550 -1.2308

Columns 764 through 770

-1.2399 -0.7719 0.0000 0.7829 1.2757 1.2846 0.7993

Columns 771 through 777

-0.0000 -0.8101 -1.3194 -1.3280 -0.8260 0.0000 0.8365

Columns 778 through 784

1.3618 1.3701 0.8519 -0.0000 -0.8620 -1.4028 -1.4109

Columns 785 through 791

-0.8769 0.0000 0.8867 1.4425 1.4503 0.9011 -0.0000

Columns 792 through 798

-0.9105 -1.4807 -1.4882 -0.9243 0.0000 0.9334 1.5175

Columns 799 through 805

1.5247 0.9467 -0.0000 -0.9554 -1.5528 -1.5596 -0.9681

Columns 806 through 812

0.0000 0.9764 1.5865 1.5931 0.9886 -0.0000 -0.9965

Columns 813 through 819

-1.6187 -1.6249 -1.0081 0.0000 1.0156 1.6493 1.6552

Columns 820 through 826

1.0266	-0.0000	-1.0337	-1.6782	-1.6838	-1.0441	0.0000
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Columns 827 through 833

1.0508	1.7055	1.7108	1.0605	-0.0000	-1.0668	-1.7311
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Columns 834 through 840

-1.7360	-1.0759	0.0000	1.0818	1.7550	1.7596	1.0903
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Columns 841 through 847

-0.0000	-1.0957	-1.7772	-1.7814	-1.1035	0.0000	1.1086
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Columns 848 through 854

1.7976	1.8015	1.1157	-0.0000	-1.1203	-1.8163	-1.8198
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Columns 855 through 861

-1.1268	0.0000	1.1309	1.8331	1.8363	1.1368	-0.0000
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Columns 862 through 868

-1.1405	-1.8482	-1.8509	-1.1456	0.0000	1.1488	1.8614
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Columns 869 through 875

1.8638	1.1533	-0.0000	-1.1561	-1.8728	-1.8748	-1.1599
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Columns 876 through 882

0.0000	1.1622	1.8823	1.8840	1.1654	-0.0000	-1.1672
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Columns 883 through 889

-1.8900	-1.8913	-1.1696	0.0000	1.1710	1.8958	1.8967
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Columns 890 through 896

1.1728	-0.0000	-1.1737	-1.8997	-1.9003	-1.1747	0.0000
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Columns 897 through 903

1.1752	1.9018	1.9020	1.1755	0.0000	-1.1755	-1.9020
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Columns 904 through 910

-1.9018	-1.1752	-0.0000	1.1747	1.9003	1.8997	1.1737
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Columns 911 through 917

0.0000	-1.1728	-1.8967	-1.8958	-1.1710	-0.0000	1.1696
Columns 918 through 924						
1.8913	1.8900	1.1672	0.0000	-1.1654	-1.8840	-1.8823
Columns 925 through 931						
-1.1622	-0.0000	1.1599	1.8748	1.8728	1.1561	0.0000
Columns 932 through 938						
-1.1533	-1.8638	-1.8614	-1.1488	-0.0000	1.1456	1.8509
Columns 939 through 945						
1.8482	1.1405	0.0000	-1.1368	-1.8363	-1.8331	-1.1309
Columns 946 through 952						
-0.0000	1.1268	1.8198	1.8163	1.1203	0.0000	-1.1157
Columns 953 through 959						
-1.8015	-1.7976	-1.1086	-0.0000	1.1035	1.7814	1.7772
Columns 960 through 966						
1.0957	0.0000	-1.0903	-1.7596	-1.7550	-1.0818	-0.0000
Columns 967 through 973						
1.0759	1.7360	1.7311	1.0668	0.0000	-1.0605	-1.7108
Columns 974 through 980						
-1.7055	-1.0508	-0.0000	1.0441	1.6838	1.6782	1.0337
Columns 981 through 987						
0.0000	-1.0266	-1.6552	-1.6493	-1.0156	-0.0000	1.0081
Columns 988 through 994						
1.6249	1.6187	0.9965	0.0000	-0.9886	-1.5931	-1.5865
Columns 995 through 1,001						
-0.9764	-0.0000	0.9681	1.5596	1.5528	0.9554	0.0000
Columns 1,002 through 1,008						
-0.9467	-1.5247	-1.5175	-0.9334	-0.0000	0.9243	1.4882

Columns 1,009 through 1,015

1.4807	0.9105	0.0000	-0.9011	-1.4503	-1.4425	-0.8867
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Columns 1,016 through 1,022

-0.0000	0.8769	1.4109	1.4028	0.8620	0.0000	-0.8519
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Columns 1,023 through 1,029

-1.3701	-1.3618	-0.8365	-0.0000	0.8260	1.3280	1.3194
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Columns 1,030 through 1,036

0.8101	0.0000	-0.7993	-1.2846	-1.2757	-0.7829	-0.0000
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Columns 1,037 through 1,043

0.7719	1.2399	1.2308	0.7550	0.0000	-0.7436	-1.1939
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Columns 1,044 through 1,050

-1.1846	-0.7263	-0.0000	0.7147	1.1468	1.1373	0.6969
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Columns 1,051 through 1,057

0.0000	-0.6850	-1.0986	-1.0888	-0.6669	-0.0000	0.6546
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Columns 1,058 through 1,064

1.0493	1.0393	0.6361	0.0000	-0.6237	-0.9989	-0.9888
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Columns 1,065 through 1,071

-0.6048	-0.0000	0.5920	0.9476	0.9372	0.5728	0.0000
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Columns 1,072 through 1,078

-0.5599	-0.8953	-0.8848	-0.5403	-0.0000	0.5271	0.8422
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Columns 1,079 through 1,085

0.8314	0.5072	0.0000	-0.4938	-0.7882	-0.7773	-0.4736
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Columns 1,086 through 1,092

-0.0000	0.4601	0.7334	0.7224	0.4396	0.0000	-0.4259
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Columns 1,093 through 1,099

-0.6779	-0.6668	-0.4052	-0.0000	0.3913	0.6218	0.6105
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Columns 1,100 through 1,106

0.3703 0.0000 -0.3562 -0.5650 -0.5536 -0.3351 -0.0000

Columns 1,107 through 1,113

0.3209 0.5077 0.4962 0.2995 0.0000 -0.2852 -0.4498

Columns 1,114 through 1,120

-0.4382 -0.2636 -0.0000 0.2492 0.3916 0.3799 0.2275

Columns 1,121 through 1,127

0.0000 -0.2130 -0.3329 -0.3211 -0.1912 -0.0000 0.1766

Columns 1,128 through 1,134

0.2739 0.2621 0.1547 0.0000 -0.1400 -0.2147 -0.2028

Columns 1,135 through 1,141

-0.1180 -0.0000 0.1033 0.1552 0.1433 0.0812 0.0000

Columns 1,142 through 1,148

-0.0664 -0.0956 -0.0836 -0.0443 -0.0000 0.0295 0.0359

Columns 1,149 through 1,155

0.0239 0.0074 0.0000 0.0074 0.0239 0.0359 0.0295

Columns 1,156 through 1,162

0.0000 -0.0443 -0.0836 -0.0956 -0.0664 -0.0000 0.0812

Columns 1,163 through 1,169

0.1433 0.1552 0.1033 0.0000 -0.1180 -0.2028 -0.2147

Columns 1,170 through 1,176

-0.1400 -0.0000 0.1547 0.2621 0.2739 0.1766 0.0000

Columns 1,177 through 1,183

-0.1912 -0.3211 -0.3329 -0.2130 -0.0000 0.2275 0.3799

Columns 1,184 through 1,190

0.3916 0.2492 0.0000 -0.2636 -0.4382 -0.4498 -0.2852

Columns 1,191 through 1,197

-0.0000 0.2995 0.4962 0.5077 0.3209 0.0000 -0.3351

Columns 1,198 through 1,204

-0.5536 -0.5650 -0.3562 -0.0000 0.3703 0.6105 0.6218

Columns 1,205 through 1,211

0.3913 0.0000 -0.4052 -0.6668 -0.6779 -0.4259 -0.0000

Columns 1,212 through 1,218

0.4396 0.7224 0.7334 0.4601 0.0000 -0.4736 -0.7773

Columns 1,219 through 1,225

-0.7882 -0.4938 -0.0000 0.5072 0.8314 0.8422 0.5271

Columns 1,226 through 1,232

0.0000 -0.5403 -0.8848 -0.8953 -0.5599 -0.0000 0.5728

Columns 1,233 through 1,239

0.9372 0.9476 0.5920 0.0000 -0.6048 -0.9888 -0.9989

Columns 1,240 through 1,246

-0.6237 -0.0000 0.6361 1.0393 1.0493 0.6546 0.0000

Columns 1,247 through 1,253

-0.6669 -1.0888 -1.0986 -0.6850 -0.0000 0.6969 1.1373

Columns 1,254 through 1,260

1.1468 0.7147 0.0000 -0.7263 -1.1846 -1.1939 -0.7436

Columns 1,261 through 1,267

-0.0000 0.7550 1.2308 1.2399 0.7719 0.0000 -0.7829

Columns 1,268 through 1,274

-1.2757 -1.2846 -0.7993 -0.0000 0.8101 1.3194 1.3280

Columns 1,275 through 1,281

0.8260 0.0000 -0.8365 -1.3618 -1.3701 -0.8519 -0.0000

Columns 1,282 through 1,288

0.8620 1.4028 1.4109 0.8769 0.0000 -0.8867 -1.4425

Columns 1,289 through 1,295

-1.4503	-0.9011	-0.0000	0.9105	1.4807	1.4882	0.9243
Columns 1,296 through 1,302						
0.0000	-0.9334	-1.5175	-1.5247	-0.9467	-0.0000	0.9554
Columns 1,303 through 1,309						
1.5528	1.5596	0.9681	0.0000	-0.9764	-1.5865	-1.5931
Columns 1,310 through 1,316						
-0.9886	-0.0000	0.9965	1.6187	1.6249	1.0081	0.0000
Columns 1,317 through 1,323						
-1.0156	-1.6493	-1.6552	-1.0266	-0.0000	1.0337	1.6782
Columns 1,324 through 1,330						
1.6838	1.0441	0.0000	-1.0508	-1.7055	-1.7108	-1.0605
Columns 1,331 through 1,337						
-0.0000	1.0668	1.7311	1.7360	1.0759	0.0000	-1.0818
Columns 1,338 through 1,344						
-1.7550	-1.7596	-1.0903	-0.0000	1.0957	1.7772	1.7814
Columns 1,345 through 1,351						
1.1035	0.0000	-1.1086	-1.7976	-1.8015	-1.1157	-0.0000
Columns 1,352 through 1,358						
1.1203	1.8163	1.8198	1.1268	0.0000	-1.1309	-1.8331
Columns 1,359 through 1,365						
-1.8363	-1.1368	-0.0000	1.1405	1.8482	1.8509	1.1456
Columns 1,366 through 1,372						
0.0000	-1.1488	-1.8614	-1.8638	-1.1533	-0.0000	1.1561
Columns 1,373 through 1,379						
1.8728	1.8748	1.1599	0.0000	-1.1622	-1.8823	-1.8840
Columns 1,380 through 1,386						
-1.1654	-0.0000	1.1672	1.8900	1.8913	1.1696	0.0000

Columns 1,387 through 1,393

-1.1710	-1.8958	-1.8967	-1.1728	-0.0000	1.1737	1.8997
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Columns 1,394 through 1,400

1.9003	1.1747	0.0000	-1.1752	-1.9018	-1.9020	-1.1755
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Columns 1,401 through 1,407

-0.0000	1.1755	1.9020	1.9018	1.1752	0.0000	-1.1747
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Columns 1,408 through 1,414

-1.9003	-1.8997	-1.1737	-0.0000	1.1728	1.8967	1.8958
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Columns 1,415 through 1,421

1.1710	0.0000	-1.1696	-1.8913	-1.8900	-1.1672	-0.0000
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Columns 1,422 through 1,428

1.1654	1.8840	1.8823	1.1622	0.0000	-1.1599	-1.8748
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Columns 1,429 through 1,435

-1.8728	-1.1561	-0.0000	1.1533	1.8638	1.8614	1.1488
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Columns 1,436 through 1,442

0.0000	-1.1456	-1.8509	-1.8482	-1.1405	-0.0000	1.1368
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Columns 1,443 through 1,449

1.8363	1.8331	1.1309	0.0000	-1.1268	-1.8198	-1.8163
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Columns 1,450 through 1,456

-1.1203	-0.0000	1.1157	1.8015	1.7976	1.1086	0.0000
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Columns 1,457 through 1,463

-1.1035	-1.7814	-1.7772	-1.0957	-0.0000	1.0903	1.7596
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Columns 1,464 through 1,470

1.7550	1.0818	0.0000	-1.0759	-1.7360	-1.7311	-1.0668
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Columns 1,471 through 1,477

-0.0000	1.0605	1.7108	1.7055	1.0508	0.0000	-1.0441
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Columns 1,478 through 1,484

-1.6838	-1.6782	-1.0337	-0.0000	1.0266	1.6552	1.6493
Columns 1,485 through 1,491						
1.0156	0.0000	-1.0081	-1.6249	-1.6187	-0.9965	-0.0000
Columns 1,492 through 1,498						
0.9886	1.5931	1.5865	0.9764	0.0000	-0.9681	-1.5596
Columns 1,499 through 1,505						
-1.5528	-0.9554	-0.0000	0.9467	1.5247	1.5175	0.9334
Columns 1,506 through 1,512						
0.0000	-0.9243	-1.4882	-1.4807	-0.9105	-0.0000	0.9011
Columns 1,513 through 1,519						
1.4503	1.4425	0.8867	0.0000	-0.8769	-1.4109	-1.4028
Columns 1,520 through 1,526						
-0.8620	-0.0000	0.8519	1.3701	1.3618	0.8365	0.0000
Columns 1,527 through 1,533						
-0.8260	-1.3280	-1.3194	-0.8101	-0.0000	0.7993	1.2846
Columns 1,534 through 1,540						
1.2757	0.7829	0.0000	-0.7719	-1.2399	-1.2308	-0.7550
Columns 1,541 through 1,547						
-0.0000	0.7436	1.1939	1.1846	0.7263	0.0000	-0.7147
Columns 1,548 through 1,554						
-1.1468	-1.1373	-0.6969	-0.0000	0.6850	1.0986	1.0888
Columns 1,555 through 1,561						
0.6669	0.0000	-0.6546	-1.0493	-1.0393	-0.6361	-0.0000
Columns 1,562 through 1,568						
0.6237	0.9989	0.9888	0.6048	0.0000	-0.5920	-0.9476
Columns 1,569 through 1,575						
-0.9372	-0.5728	-0.0000	0.5599	0.8953	0.8848	0.5403

Columns 1,576 through 1,582

0.0000	-0.5271	-0.8422	-0.8314	-0.5072	-0.0000	0.4938
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Columns 1,583 through 1,589

0.7882	0.7773	0.4736	0.0000	-0.4601	-0.7334	-0.7224
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Columns 1,590 through 1,596

-0.4396	-0.0000	0.4259	0.6779	0.6668	0.4052	0.0000
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Columns 1,597 through 1,603

-0.3913	-0.6218	-0.6105	-0.3703	-0.0000	0.3562	0.5650
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Columns 1,604 through 1,610

0.5536	0.3351	0.0000	-0.3209	-0.5077	-0.4962	-0.2995
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Columns 1,611 through 1,617

-0.0000	0.2852	0.4498	0.4382	0.2636	0.0000	-0.2492
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Columns 1,618 through 1,624

-0.3916	-0.3799	-0.2275	-0.0000	0.2130	0.3329	0.3211
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Columns 1,625 through 1,631

0.1912	0.0000	-0.1766	-0.2739	-0.2621	-0.1547	-0.0000
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Columns 1,632 through 1,638

0.1400	0.2147	0.2028	0.1180	0.0000	-0.1033	-0.1552
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Columns 1,639 through 1,645

-0.1433	-0.0812	-0.0000	0.0664	0.0956	0.0836	0.0443
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Columns 1,646 through 1,652

0.0000	-0.0295	-0.0359	-0.0239	-0.0074	-0.0000	-0.0074
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Columns 1,653 through 1,659

-0.0239	-0.0359	-0.0295	-0.0000	0.0443	0.0836	0.0956
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Columns 1,660 through 1,666

0.0664	0.0000	-0.0812	-0.1433	-0.1552	-0.1033	-0.0000
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Columns 1,667 through 1,673

0.1180	0.2028	0.2147	0.1400	0.0000	-0.1547	-0.2621
Columns 1,674 through 1,680						
-0.2739	-0.1766	-0.0000	0.1912	0.3211	0.3329	0.2130
Columns 1,681 through 1,687						
0.0000	-0.2275	-0.3799	-0.3916	-0.2492	-0.0000	0.2636
Columns 1,688 through 1,694						
0.4382	0.4498	0.2852	0.0000	-0.2995	-0.4962	-0.5077
Columns 1,695 through 1,701						
-0.3209	-0.0000	0.3351	0.5536	0.5650	0.3562	0.0000
Columns 1,702 through 1,708						
-0.3703	-0.6105	-0.6218	-0.3913	-0.0000	0.4052	0.6668
Columns 1,709 through 1,715						
0.6779	0.4259	0.0000	-0.4396	-0.7224	-0.7334	-0.4601
Columns 1,716 through 1,722						
-0.0000	0.4736	0.7773	0.7882	0.4938	0.0000	-0.5072
Columns 1,723 through 1,729						
-0.8314	-0.8422	-0.5271	-0.0000	0.5403	0.8848	0.8953
Columns 1,730 through 1,736						
0.5599	0.0000	-0.5728	-0.9372	-0.9476	-0.5920	-0.0000
Columns 1,737 through 1,743						
0.6048	0.9888	0.9989	0.6237	0.0000	-0.6361	-1.0393
Columns 1,744 through 1,750						
-1.0493	-0.6546	-0.0000	0.6669	1.0888	1.0986	0.6850
Columns 1,751 through 1,757						
0.0000	-0.6969	-1.1373	-1.1468	-0.7147	-0.0000	0.7263
Columns 1,758 through 1,764						
1.1846	1.1939	0.7436	0.0000	-0.7550	-1.2308	-1.2399

Columns 1,765 through 1,771

-0.7719	0.0000	0.7829	1.2757	1.2846	0.7993	0.0000
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Columns 1,772 through 1,778

-0.8101	-1.3194	-1.3280	-0.8260	-0.0000	0.8365	1.3618
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Columns 1,779 through 1,785

1.3701	0.8519	0.0000	-0.8620	-1.4028	-1.4109	-0.8769
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Columns 1,786 through 1,792

-0.0000	0.8867	1.4425	1.4503	0.9011	0.0000	-0.9105
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Columns 1,793 through 1,799

-1.4807	-1.4882	-0.9243	-0.0000	0.9334	1.5175	1.5247
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Columns 1,800 through 1,801

0.9467	0.0000
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