

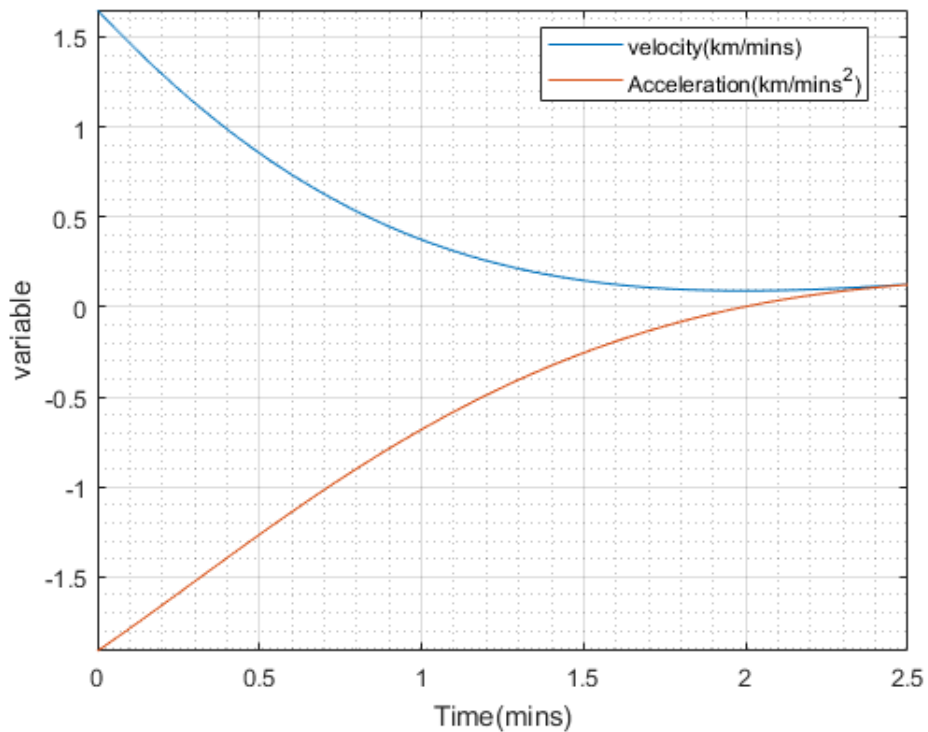
EDITOR

```
commandwindow

clear

clc

close all
syms t
d=1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t
xn=[0:0.01:2.5]
xy=subs(d,xn)
yy=diff(d)
de=subs(yy,xn)
dk=diff(yy)
kk=subs(dk,xn)
figure(1)
plot(xn,de,xn,dk)
axis tight
grid on
grid minor
xlabel('Time(mins)')
ylabel('variable')
legend('velocity(km/mins)', 'Acceleration(km/mins^2)', 'location', 'Best')
```



COMMANDWINDOW

d =

$$(3*t)/8 + (3*\sin((17*t)/20)*\exp(-(3*t)/4))/2$$

xn =

Columns 1 through 7

0 0.0100 0.0200 0.0300 0.0400 0.0500 0.0600

Columns 8 through 14

0.0700 0.0800 0.0900 0.1000 0.1100 0.1200 0.1300

Columns 15 through 21

0.1400 0.1500 0.1600 0.1700 0.1800 0.1900 0.2000

Columns 22 through 28

0.2100 0.2200 0.2300 0.2400 0.2500 0.2600 0.2700

Columns 29 through 35

0.2800 0.2900 0.3000 0.3100 0.3200 0.3300 0.3400

Columns 36 through 42

0.3500 0.3600 0.3700 0.3800 0.3900 0.4000 0.4100

Columns 43 through 49

0.4200 0.4300 0.4400 0.4500 0.4600 0.4700 0.4800

Columns 50 through 56

0.4900 0.5000 0.5100 0.5200 0.5300 0.5400 0.5500

Columns 57 through 63

0.5600 0.5700 0.5800 0.5900 0.6000 0.6100 0.6200

Columns 64 through 70

0.6300 0.6400 0.6500 0.6600 0.6700 0.6800 0.6900

Columns 71 through 77

0.7000 0.7100 0.7200 0.7300 0.7400 0.7500 0.7600

Columns 78 through 84

0.7700 0.7800 0.7900 0.8000 0.8100 0.8200 0.8300

Columns 85 through 91

0.8400 0.8500 0.8600 0.8700 0.8800 0.8900 0.9000

Columns 92 through 98

0.9100 0.9200 0.9300 0.9400 0.9500 0.9600 0.9700

Columns 99 through 105

0.9800 0.9900 1.0000 1.0100 1.0200 1.0300 1.0400

Columns 106 through 112

1.0500 1.0600 1.0700 1.0800 1.0900 1.1000 1.1100

Columns 113 through 119

1.1200 1.1300 1.1400 1.1500 1.1600 1.1700 1.1800

Columns 120 through 126

1.1900 1.2000 1.2100 1.2200 1.2300 1.2400 1.2500

Columns 127 through 133

1.2600 1.2700 1.2800 1.2900 1.3000 1.3100 1.3200

Columns 134 through 140

1.3300 1.3400 1.3500 1.3600 1.3700 1.3800 1.3900

Columns 141 through 147

1.4000 1.4100 1.4200 1.4300 1.4400 1.4500 1.4600

Columns 148 through 154

1.4700 1.4800 1.4900 1.5000 1.5100 1.5200 1.5300

Columns 155 through 161

1.5400 1.5500 1.5600 1.5700 1.5800 1.5900 1.6000

Columns 162 through 168

1.6100 1.6200 1.6300 1.6400 1.6500 1.6600 1.6700

Columns 169 through 175

1.6800 1.6900 1.7000 1.7100 1.7200 1.7300 1.7400

Columns 176 through 182

1.7500 1.7600 1.7700 1.7800 1.7900 1.8000 1.8100

Columns 183 through 189

1.8200 1.8300 1.8400 1.8500 1.8600 1.8700 1.8800

Columns 190 through 196

1.8900 1.9000 1.9100 1.9200 1.9300 1.9400 1.9500

Columns 197 through 203

1.9600 1.9700 1.9800 1.9900 2.0000 2.0100 2.0200

Columns 204 through 210

2.0300 2.0400 2.0500 2.0600 2.0700 2.0800 2.0900

Columns 211 through 217

2.1000 2.1100 2.1200 2.1300 2.1400 2.1500 2.1600

Columns 218 through 224

2.1700 2.1800 2.1900 2.2000 2.2100 2.2200 2.2300

Columns 225 through 231

2.2400 2.2500 2.2600 2.2700 2.2800 2.2900 2.3000

Columns 232 through 238

2.3100 2.3200 2.3300 2.3400 2.3500 2.3600 2.3700

Columns 239 through 245

2.3800 2.3900 2.4000 2.4100 2.4200 2.4300 2.4400

Columns 246 through 251

2.4500 2.4600 2.4700 2.4800 2.4900 2.5000

xy =

[0, (3*exp(-3/400)*sin(17/2000))/2 + 3/800, (3*exp(-3/200)*sin(17/1000))/2 + 3/400, (3*exp(-9/400)*sin(51/2000))/2 + 9/800, (3*exp(-3/100)*sin(17/500))/2 + 3/200, (3*exp(-3/80)*sin(17/400))/2 + 3/160, (3*exp(-9/200)*sin(51/1000))/2 + 9/400, (3*exp(-21/400)*sin(119/2000))/2 + 21/800, (3*exp(-3/50)*sin(17/250))/2 + 3/100, (3*exp(-27/400)*sin(153/2000))/2 + 27/800, (3*exp(-3/40)*sin(17/200))/2 + 3/80, (3*exp(-33/400)*sin(187/2000))/2 + 33/800, (3*exp(-9/100)*sin(51/500))/2 + 9/200, (3*exp(-39/400)*sin(221/2000))/2 + 39/800, (3*exp(-21/200)*sin(119/1000))/2 + 21/400, (3*exp(-9/80)*sin(51/400))/2 + 9/160, (3*exp(-3/25)*sin(17/125))/2 + 3/50, (3*exp(-51/400)*sin(289/2000))/2 + 51/800, (3*exp(-27/200)*sin(153/1000))/2 + 27/400, (3*exp(-57/400)*sin(323/2000))/2 + 57/800, (3*exp(-3/20)*sin(17/100))/2 + 3/40, (3*exp(-63/400)*sin(357/2000))/2 + 63/800, (3*exp(-33/200)*sin(187/1000))/2 + 33/400, (3*exp(-69/400)*sin(391/2000))/2 + 69/800, (3*exp(-9/50)*sin(51/250))/2 + 9/100, (3*exp(-3/16)*sin(17/80))/2 + 3/32, (3*exp(-39/200)*sin(221/1000))/2 + 39/400, (3*exp(-81/400)*sin(459/2000))/2 + 81/800, (3*exp(-21/100)*sin(119/500))/2 + 21/200, (3*exp(-87/400)*sin(493/2000))/2 + 87/800, (3*exp(-9/40)*sin(51/200))/2 + 9/80, (3*exp(-93/400)*sin(527/2000))/2 + 93/800, (3*exp(-6/25)*sin(34/125))/2 + 3/25, (3*exp(-99/400)*sin(561/2000))/2 + 99/800, (3*exp(-51/200)*sin(289/1000))/2 + 51/400, (3*exp(-21/80)*sin(119/400))/2 + 21/160, (3*exp(-27/100)*sin(153/500))/2 + 27/200, (3*exp(-111/400)*sin(629/2000))/2 + 111/800, (3*exp(-57/200)*sin(323/1000))/2 + 57/400, (3*exp(-117/400)*sin(663/2000))/2 + 117/800, (3*exp(-3/10)*sin(17/50))/2 + 3/20, (3*exp(-123/400)*sin(697/2000))/2 + 123/800, (3*exp(-63/200)*sin(357/1000))/2 + 63/400, (3*exp(-129/400)*sin(731/2000))/2 + 129/800, (3*exp(-33/100)*sin(187/500))/2 + 33/200, (3*exp(-27/80)*sin(153/400))/2 + 27/160, (3*exp(-69/200)*sin(391/1000))/2 + 69/400, (3*exp(-141/400)*sin(799/2000))/2 + 141/800, (3*exp(-9/25)*sin(51/125))/2 + 9/50, (3*exp(-147/400)*sin(833/2000))/2 + 147/800, (3*exp(-3/8)*sin(17/40))/2 + 3/16,

$(3*\exp(-153/400)*\sin(867/2000))/2 + 153/800, (3*\exp(-39/100)*\sin(221/500))/2 + 39/200,$
 $(3*\exp(-159/400)*\sin(901/2000))/2 + 159/800, (3*\exp(-81/200)*\sin(459/1000))/2 +$
 $81/400, (3*\exp(-33/80)*\sin(187/400))/2 + 33/160, (3*\exp(-21/50)*\sin(119/250))/2 +$
 $21/100, (3*\exp(-171/400)*\sin(969/2000))/2 + 171/800, (3*\exp(-87/200)*\sin(493/1000))/2$
 $+ 87/400, (3*\exp(-177/400)*\sin(1003/2000))/2 + 177/800, (3*\exp(-9/20)*\sin(51/100))/2 +$
 $9/40, (3*\exp(-183/400)*\sin(1037/2000))/2 + 183/800, (3*\exp(-93/200)*\sin(527/1000))/2 +$
 $93/400, (3*\exp(-189/400)*\sin(1071/2000))/2 + 189/800, (3*\exp(-12/25)*\sin(68/125))/2 +$
 $6/25, (3*\exp(-39/80)*\sin(221/400))/2 + 39/160, (3*\exp(-99/200)*\sin(561/1000))/2 +$
 $99/400, (3*\exp(-201/400)*\sin(1139/2000))/2 + 201/800, (3*\exp(-51/100)*\sin(289/500))/2$
 $+ 51/200, (3*\exp(-207/400)*\sin(1173/2000))/2 + 207/800, (3*\exp(-21/40)*\sin(119/200))/2$
 $+ 21/80, (3*\exp(-213/400)*\sin(1207/2000))/2 + 213/800, (3*\exp(-27/50)*\sin(153/250))/2$
 $+ 27/100, (3*\exp(-219/400)*\sin(1241/2000))/2 + 219/800, (3*\exp(-$
 $111/200)*\sin(629/1000))/2 + 111/400, (3*\exp(-9/16)*\sin(51/80))/2 + 9/32, (3*\exp(-$
 $57/100)*\sin(323/500))/2 + 57/200, (3*\exp(-231/400)*\sin(1309/2000))/2 + 231/800,$
 $(3*\exp(-117/200)*\sin(663/1000))/2 + 117/400, (3*\exp(-237/400)*\sin(1343/2000))/2 +$
 $237/800, (3*\exp(-3/5)*\sin(17/25))/2 + 3/10, (3*\exp(-243/400)*\sin(1377/2000))/2 +$
 $243/800, (3*\exp(-123/200)*\sin(697/1000))/2 + 123/400, (3*\exp(-$
 $249/400)*\sin(1411/2000))/2 + 249/800, (3*\exp(-63/100)*\sin(357/500))/2 + 63/200,$
 $(3*\exp(-51/80)*\sin(289/400))/2 + 51/160, (3*\exp(-129/200)*\sin(731/1000))/2 + 129/400,$
 $(3*\exp(-261/400)*\sin(1479/2000))/2 + 261/800, (3*\exp(-33/50)*\sin(187/250))/2 + 33/100,$
 $(3*\exp(-267/400)*\sin(1513/2000))/2 + 267/800, (3*\exp(-27/40)*\sin(153/200))/2 + 27/80,$
 $(3*\exp(-273/400)*\sin(1547/2000))/2 + 273/800, (3*\exp(-69/100)*\sin(391/500))/2 +$
 $69/200, (3*\exp(-279/400)*\sin(1581/2000))/2 + 279/800, (3*\exp(-$
 $141/200)*\sin(799/1000))/2 + 141/400, (3*\exp(-57/80)*\sin(323/400))/2 + 57/160, (3*\exp(-$
 $18/25)*\sin(102/125))/2 + 9/25, (3*\exp(-291/400)*\sin(1649/2000))/2 + 291/800, (3*\exp(-$
 $147/200)*\sin(833/1000))/2 + 147/400, (3*\exp(-297/400)*\sin(1683/2000))/2 + 297/800,$
 $(3*\exp(-3/4)*\sin(17/20))/2 + 3/8, (3*\exp(-303/400)*\sin(1717/2000))/2 + 303/800,$
 $(3*\exp(-153/200)*\sin(867/1000))/2 + 153/400, (3*\exp(-309/400)*\sin(1751/2000))/2 +$
 $309/800, (3*\exp(-39/50)*\sin(221/250))/2 + 39/100, (3*\exp(-63/80)*\sin(357/400))/2 +$
 $63/160, (3*\exp(-159/200)*\sin(901/1000))/2 + 159/400, (3*\exp(-$
 $321/400)*\sin(1819/2000))/2 + 321/800, (3*\exp(-81/100)*\sin(459/500))/2 + 81/200,$
 $(3*\exp(-327/400)*\sin(1853/2000))/2 + 327/800, (3*\exp(-33/40)*\sin(187/200))/2 + 33/80,$
 $(3*\exp(-333/400)*\sin(1887/2000))/2 + 333/800, (3*\exp(-21/25)*\sin(119/125))/2 + 21/50,$
 $(3*\exp(-339/400)*\sin(1921/2000))/2 + 339/800, (3*\exp(-171/200)*\sin(969/1000))/2 +$
 $171/400, (3*\exp(-69/80)*\sin(391/400))/2 + 69/160, (3*\exp(-87/100)*\sin(493/500))/2 +$
 $87/200, (3*\exp(-351/400)*\sin(1989/2000))/2 + 351/800, (3*\exp(-$
 $177/200)*\sin(1003/1000))/2 + 177/400, (3*\exp(-357/400)*\sin(2023/2000))/2 + 357/800,$
 $(3*\exp(-9/10)*\sin(51/50))/2 + 9/20, (3*\exp(-363/400)*\sin(2057/2000))/2 + 363/800,$
 $(3*\exp(-183/200)*\sin(1037/1000))/2 + 183/400, (3*\exp(-369/400)*\sin(2091/2000))/2 +$
 $369/800, (3*\exp(-93/100)*\sin(527/500))/2 + 93/200, (3*\exp(-15/16)*\sin(17/16))/2 +$
 $15/32, (3*\exp(-189/200)*\sin(1071/1000))/2 + 189/400, (3*\exp(-$
 $381/400)*\sin(2159/2000))/2 + 381/800, (3*\exp(-24/25)*\sin(136/125))/2 + 12/25, (3*\exp(-$
 $387/400)*\sin(2193/2000))/2 + 387/800, (3*\exp(-39/40)*\sin(221/200))/2 + 39/80, (3*\exp(-$
 $393/400)*\sin(2227/2000))/2 + 393/800, (3*\exp(-99/100)*\sin(561/500))/2 + 99/200,$
 $(3*\exp(-399/400)*\sin(2261/2000))/2 + 399/800, (3*\exp(-201/200)*\sin(1139/1000))/2 +$
 $201/400, (3*\exp(-81/80)*\sin(459/400))/2 + 81/160, (3*\exp(-51/50)*\sin(289/250))/2 +$
 $51/100, (3*\exp(-411/400)*\sin(2329/2000))/2 + 411/800, (3*\exp(-$
 $207/200)*\sin(1173/1000))/2 + 207/400, (3*\exp(-417/400)*\sin(2363/2000))/2 + 417/800,$
 $(3*\exp(-21/20)*\sin(119/100))/2 + 21/40, (3*\exp(-423/400)*\sin(2397/2000))/2 + 423/800,$
 $(3*\exp(-213/200)*\sin(1207/1000))/2 + 213/400, (3*\exp(-429/400)*\sin(2431/2000))/2 +$
 $429/800, (3*\exp(-27/25)*\sin(153/125))/2 + 27/50, (3*\exp(-87/80)*\sin(493/400))/2 +$

87/160, (3*exp(-219/200)*sin(1241/1000))/2 + 219/400, (3*exp(-441/400)*sin(2499/2000))/2 + 441/800, (3*exp(-111/100)*sin(629/500))/2 + 111/200, (3*exp(-447/400)*sin(2533/2000))/2 + 447/800, (3*exp(-9/8)*sin(51/40))/2 + 9/16, (3*exp(-453/400)*sin(2567/2000))/2 + 453/800, (3*exp(-57/50)*sin(323/250))/2 + 57/100, (3*exp(-459/400)*sin(2601/2000))/2 + 459/800, (3*exp(-231/200)*sin(1309/1000))/2 + 231/400, (3*exp(-93/80)*sin(527/400))/2 + 93/160, (3*exp(-117/100)*sin(663/500))/2 + 117/200, (3*exp(-471/400)*sin(2669/2000))/2 + 471/800, (3*exp(-237/200)*sin(1343/1000))/2 + 237/400, (3*exp(-477/400)*sin(2703/2000))/2 + 477/800, (3*exp(-6/5)*sin(34/25))/2 + 3/5, (3*exp(-483/400)*sin(2737/2000))/2 + 483/800, (3*exp(-243/200)*sin(1377/1000))/2 + 243/400, (3*exp(-489/400)*sin(2771/2000))/2 + 489/800, (3*exp(-123/100)*sin(697/500))/2 + 123/200, (3*exp(-99/80)*sin(561/400))/2 + 99/160, (3*exp(-249/200)*sin(1411/1000))/2 + 249/400, (3*exp(-501/400)*sin(2839/2000))/2 + 501/800, (3*exp(-63/50)*sin(357/250))/2 + 63/100, (3*exp(-507/400)*sin(2873/2000))/2 + 507/800, (3*exp(-51/40)*sin(289/200))/2 + 51/80, (3*exp(-513/400)*sin(2907/2000))/2 + 513/800, (3*exp(-129/100)*sin(731/500))/2 + 129/200, (3*exp(-519/400)*sin(2941/2000))/2 + 519/800, (3*exp(-261/200)*sin(1479/1000))/2 + 261/400, (3*exp(-21/16)*sin(119/80))/2 + 21/32, (3*exp(-33/25)*sin(187/125))/2 + 33/50, (3*exp(-531/400)*sin(3009/2000))/2 + 531/800, (3*exp(-267/200)*sin(1513/1000))/2 + 267/400, (3*exp(-537/400)*sin(3043/2000))/2 + 537/800, (3*exp(-27/20)*sin(153/100))/2 + 27/40, (3*exp(-543/400)*sin(3077/2000))/2 + 543/800, (3*exp(-273/200)*sin(1547/1000))/2 + 273/400, (3*exp(-549/400)*sin(3111/2000))/2 + 549/800, (3*exp(-69/50)*sin(391/250))/2 + 69/100, (3*exp(-111/80)*sin(629/400))/2 + 111/160, (3*exp(-279/200)*sin(1581/1000))/2 + 279/400, (3*exp(-561/400)*sin(3179/2000))/2 + 561/800, (3*exp(-141/100)*sin(799/500))/2 + 141/200, (3*exp(-567/400)*sin(3213/2000))/2 + 567/800, (3*exp(-57/40)*sin(323/200))/2 + 57/80, (3*exp(-573/400)*sin(3247/2000))/2 + 573/800, (3*exp(-36/25)*sin(204/125))/2 + 18/25, (3*exp(-579/400)*sin(3281/2000))/2 + 579/800, (3*exp(-291/200)*sin(1649/1000))/2 + 291/400, (3*exp(-117/80)*sin(663/400))/2 + 117/160, (3*exp(-147/100)*sin(833/500))/2 + 147/200, (3*exp(-591/400)*sin(3349/2000))/2 + 591/800, (3*exp(-297/200)*sin(1683/1000))/2 + 297/400, (3*exp(-597/400)*sin(3383/2000))/2 + 597/800, (3*exp(-3/2)*sin(17/10))/2 + 3/4, (3*exp(-603/400)*sin(3417/2000))/2 + 603/800, (3*exp(-303/200)*sin(1717/1000))/2 + 303/400, (3*exp(-609/400)*sin(3451/2000))/2 + 609/800, (3*exp(-153/100)*sin(867/500))/2 + 153/200, (3*exp(-123/80)*sin(697/400))/2 + 123/160, (3*exp(-309/200)*sin(1751/1000))/2 + 309/400, (3*exp(-621/400)*sin(3519/2000))/2 + 621/800, (3*exp(-39/25)*sin(221/125))/2 + 39/50, (3*exp(-627/400)*sin(3553/2000))/2 + 627/800, (3*exp(-63/40)*sin(357/200))/2 + 63/80, (3*exp(-633/400)*sin(3587/2000))/2 + 633/800, (3*exp(-159/100)*sin(901/500))/2 + 159/200, (3*exp(-639/400)*sin(3621/2000))/2 + 639/800, (3*exp(-321/200)*sin(1819/1000))/2 + 321/400, (3*exp(-129/80)*sin(731/400))/2 + 129/160, (3*exp(-81/50)*sin(459/250))/2 + 81/100, (3*exp(-651/400)*sin(3689/2000))/2 + 651/800, (3*exp(-327/200)*sin(1853/1000))/2 + 327/400, (3*exp(-657/400)*sin(3723/2000))/2 + 657/800, (3*exp(-33/20)*sin(187/100))/2 + 33/40, (3*exp(-663/400)*sin(3757/2000))/2 + 663/800, (3*exp(-333/200)*sin(1887/1000))/2 + 333/400, (3*exp(-669/400)*sin(3791/2000))/2 + 669/800, (3*exp(-42/25)*sin(238/125))/2 + 21/25, (3*exp(-27/16)*sin(153/80))/2 + 27/32, (3*exp(-339/200)*sin(1921/1000))/2 + 339/400, (3*exp(-681/400)*sin(3859/2000))/2 + 681/800, (3*exp(-171/100)*sin(969/500))/2 + 171/200, (3*exp(-687/400)*sin(3893/2000))/2 + 687/800, (3*exp(-69/40)*sin(391/200))/2 + 69/80, (3*exp(-693/400)*sin(3927/2000))/2 + 693/800, (3*exp(-87/50)*sin(493/250))/2 + 87/100, (3*exp(-699/400)*sin(3961/2000))/2 + 699/800, (3*exp(-351/200)*sin(1989/1000))/2 + 351/400, (3*exp(-141/80)*sin(799/400))/2 + 141/160, (3*exp(-177/100)*sin(1003/500))/2 + 177/200, (3*exp(-711/400)*sin(4029/2000))/2 + 711/800, (3*exp(-

$357/200) * \sin(2023/1000) / 2 + 357/400, (3 * \exp(-717/400) * \sin(4063/2000)) / 2 + 717/800,$
 $(3 * \exp(-9/5) * \sin(51/25)) / 2 + 9/10, (3 * \exp(-723/400) * \sin(4097/2000)) / 2 + 723/800,$
 $(3 * \exp(-363/200) * \sin(2057/1000)) / 2 + 363/400, (3 * \exp(-729/400) * \sin(4131/2000)) / 2 +$
 $729/800, (3 * \exp(-183/100) * \sin(1037/500)) / 2 + 183/200, (3 * \exp(-147/80) * \sin(833/400)) / 2$
 $+ 147/160, (3 * \exp(-369/200) * \sin(2091/1000)) / 2 + 369/400, (3 * \exp(-$
 $741/400) * \sin(4199/2000)) / 2 + 741/800, (3 * \exp(-93/50) * \sin(527/250)) / 2 + 93/100,$
 $(3 * \exp(-747/400) * \sin(4233/2000)) / 2 + 747/800, (3 * \exp(-15/8) * \sin(17/8)) / 2 + 15/16]$

yy =

$(51 * \cos((17 * t) / 20) * \exp(-(3 * t) / 4)) / 40 - (9 * \sin((17 * t) / 20) * \exp(-(3 * t) / 4)) / 8 + 3/8$

de =

$[33/20, (51 * \cos(17/2000) * \exp(-3/400)) / 40 - (9 * \exp(-3/400) * \sin(17/2000)) / 8 + 3/8,$
 $(51 * \cos(17/1000) * \exp(-3/200)) / 40 - (9 * \exp(-3/200) * \sin(17/1000)) / 8 + 3/8,$
 $(51 * \cos(51/2000) * \exp(-9/400)) / 40 - (9 * \exp(-9/400) * \sin(51/2000)) / 8 + 3/8,$
 $(51 * \cos(17/500) * \exp(-3/100)) / 40 - (9 * \exp(-3/100) * \sin(17/500)) / 8 + 3/8,$
 $(51 * \cos(17/400) * \exp(-3/80)) / 40 - (9 * \exp(-3/80) * \sin(17/400)) / 8 + 3/8,$
 $(51 * \cos(51/1000) * \exp(-9/200)) / 40 - (9 * \exp(-9/200) * \sin(51/1000)) / 8 + 3/8,$
 $(51 * \cos(119/2000) * \exp(-21/400)) / 40 - (9 * \exp(-21/400) * \sin(119/2000)) / 8 + 3/8,$
 $(51 * \cos(17/250) * \exp(-3/50)) / 40 - (9 * \exp(-3/50) * \sin(17/250)) / 8 + 3/8,$
 $(51 * \cos(153/2000) * \exp(-27/400)) / 40 - (9 * \exp(-27/400) * \sin(153/2000)) / 8 + 3/8,$
 $(51 * \cos(17/200) * \exp(-3/40)) / 40 - (9 * \exp(-3/40) * \sin(17/200)) / 8 + 3/8,$
 $(51 * \cos(187/2000) * \exp(-33/400)) / 40 - (9 * \exp(-33/400) * \sin(187/2000)) / 8 + 3/8,$
 $(51 * \cos(51/500) * \exp(-9/100)) / 40 - (9 * \exp(-9/100) * \sin(51/500)) / 8 + 3/8,$
 $(51 * \cos(221/2000) * \exp(-39/400)) / 40 - (9 * \exp(-39/400) * \sin(221/2000)) / 8 + 3/8,$
 $(51 * \cos(119/1000) * \exp(-21/200)) / 40 - (9 * \exp(-21/200) * \sin(119/1000)) / 8 + 3/8,$
 $(51 * \cos(51/400) * \exp(-9/80)) / 40 - (9 * \exp(-9/80) * \sin(51/400)) / 8 + 3/8,$
 $(51 * \cos(17/125) * \exp(-3/25)) / 40 - (9 * \exp(-3/25) * \sin(17/125)) / 8 + 3/8,$
 $(51 * \cos(289/2000) * \exp(-51/400)) / 40 - (9 * \exp(-51/400) * \sin(289/2000)) / 8 + 3/8,$
 $(51 * \cos(153/1000) * \exp(-27/200)) / 40 - (9 * \exp(-27/200) * \sin(153/1000)) / 8 + 3/8,$
 $(51 * \cos(323/2000) * \exp(-57/400)) / 40 - (9 * \exp(-57/400) * \sin(323/2000)) / 8 + 3/8,$
 $(51 * \cos(17/100) * \exp(-3/20)) / 40 - (9 * \exp(-3/20) * \sin(17/100)) / 8 + 3/8,$
 $(51 * \cos(357/2000) * \exp(-63/400)) / 40 - (9 * \exp(-63/400) * \sin(357/2000)) / 8 + 3/8,$
 $(51 * \cos(187/1000) * \exp(-33/200)) / 40 - (9 * \exp(-33/200) * \sin(187/1000)) / 8 + 3/8,$
 $(51 * \cos(391/2000) * \exp(-69/400)) / 40 - (9 * \exp(-69/400) * \sin(391/2000)) / 8 + 3/8,$

$(51*\cos(51/250)*\exp(-9/50))/40 - (9*\exp(-9/50)*\sin(51/250))/8 + 3/8,$
 $(51*\cos(17/80)*\exp(-3/16))/40 - (9*\exp(-3/16)*\sin(17/80))/8 + 3/8,$
 $(51*\cos(221/1000)*\exp(-39/200))/40 - (9*\exp(-39/200)*\sin(221/1000))/8 + 3/8,$
 $(51*\cos(459/2000)*\exp(-81/400))/40 - (9*\exp(-81/400)*\sin(459/2000))/8 + 3/8,$
 $(51*\cos(119/500)*\exp(-21/100))/40 - (9*\exp(-21/100)*\sin(119/500))/8 + 3/8,$
 $(51*\cos(493/2000)*\exp(-87/400))/40 - (9*\exp(-87/400)*\sin(493/2000))/8 + 3/8,$
 $(51*\cos(51/200)*\exp(-9/40))/40 - (9*\exp(-9/40)*\sin(51/200))/8 + 3/8,$
 $(51*\cos(527/2000)*\exp(-93/400))/40 - (9*\exp(-93/400)*\sin(527/2000))/8 + 3/8,$
 $(51*\cos(34/125)*\exp(-6/25))/40 - (9*\exp(-6/25)*\sin(34/125))/8 + 3/8,$
 $(51*\cos(561/2000)*\exp(-99/400))/40 - (9*\exp(-99/400)*\sin(561/2000))/8 + 3/8,$
 $(51*\cos(289/1000)*\exp(-51/200))/40 - (9*\exp(-51/200)*\sin(289/1000))/8 + 3/8,$
 $(51*\cos(119/400)*\exp(-21/80))/40 - (9*\exp(-21/80)*\sin(119/400))/8 + 3/8,$
 $(51*\cos(153/500)*\exp(-27/100))/40 - (9*\exp(-27/100)*\sin(153/500))/8 + 3/8,$
 $(51*\cos(629/2000)*\exp(-111/400))/40 - (9*\exp(-111/400)*\sin(629/2000))/8 + 3/8,$
 $(51*\cos(323/1000)*\exp(-57/200))/40 - (9*\exp(-57/200)*\sin(323/1000))/8 + 3/8,$
 $(51*\cos(663/2000)*\exp(-117/400))/40 - (9*\exp(-117/400)*\sin(663/2000))/8 + 3/8,$
 $(51*\cos(17/50)*\exp(-3/10))/40 - (9*\exp(-3/10)*\sin(17/50))/8 + 3/8,$
 $(51*\cos(697/2000)*\exp(-123/400))/40 - (9*\exp(-123/400)*\sin(697/2000))/8 + 3/8,$
 $(51*\cos(357/1000)*\exp(-63/200))/40 - (9*\exp(-63/200)*\sin(357/1000))/8 + 3/8,$
 $(51*\cos(731/2000)*\exp(-129/400))/40 - (9*\exp(-129/400)*\sin(731/2000))/8 + 3/8,$
 $(51*\cos(187/500)*\exp(-33/100))/40 - (9*\exp(-33/100)*\sin(187/500))/8 + 3/8,$
 $(51*\cos(153/400)*\exp(-27/80))/40 - (9*\exp(-27/80)*\sin(153/400))/8 + 3/8,$
 $(51*\cos(391/1000)*\exp(-69/200))/40 - (9*\exp(-69/200)*\sin(391/1000))/8 + 3/8,$
 $(51*\cos(799/2000)*\exp(-141/400))/40 - (9*\exp(-141/400)*\sin(799/2000))/8 + 3/8,$
 $(51*\cos(51/125)*\exp(-9/25))/40 - (9*\exp(-9/25)*\sin(51/125))/8 + 3/8,$
 $(51*\cos(833/2000)*\exp(-147/400))/40 - (9*\exp(-147/400)*\sin(833/2000))/8 + 3/8,$
 $(51*\cos(17/40)*\exp(-3/8))/40 - (9*\exp(-3/8)*\sin(17/40))/8 + 3/8,$
 $(51*\cos(867/2000)*\exp(-153/400))/40 - (9*\exp(-153/400)*\sin(867/2000))/8 + 3/8,$
 $(51*\cos(221/500)*\exp(-39/100))/40 - (9*\exp(-39/100)*\sin(221/500))/8 + 3/8,$
 $(51*\cos(901/2000)*\exp(-159/400))/40 - (9*\exp(-159/400)*\sin(901/2000))/8 + 3/8,$
 $(51*\cos(459/1000)*\exp(-81/200))/40 - (9*\exp(-81/200)*\sin(459/1000))/8 + 3/8,$
 $(51*\cos(187/400)*\exp(-33/80))/40 - (9*\exp(-33/80)*\sin(187/400))/8 + 3/8,$
 $(51*\cos(119/250)*\exp(-21/50))/40 - (9*\exp(-21/50)*\sin(119/250))/8 + 3/8,$
 $(51*\cos(969/2000)*\exp(-171/400))/40 - (9*\exp(-171/400)*\sin(969/2000))/8 + 3/8,$
 $(51*\cos(493/1000)*\exp(-87/200))/40 - (9*\exp(-87/200)*\sin(493/1000))/8 + 3/8,$
 $(51*\cos(1003/2000)*\exp(-177/400))/40 - (9*\exp(-177/400)*\sin(1003/2000))/8 + 3/8,$
 $(51*\cos(51/100)*\exp(-9/20))/40 - (9*\exp(-9/20)*\sin(51/100))/8 + 3/8,$
 $(51*\cos(1037/2000)*\exp(-183/400))/40 - (9*\exp(-183/400)*\sin(1037/2000))/8 + 3/8,$
 $(51*\cos(527/1000)*\exp(-93/200))/40 - (9*\exp(-93/200)*\sin(527/1000))/8 + 3/8,$
 $(51*\cos(1071/2000)*\exp(-189/400))/40 - (9*\exp(-189/400)*\sin(1071/2000))/8 + 3/8,$
 $(51*\cos(68/125)*\exp(-12/25))/40 - (9*\exp(-12/25)*\sin(68/125))/8 + 3/8,$
 $(51*\cos(221/400)*\exp(-39/80))/40 - (9*\exp(-39/80)*\sin(221/400))/8 + 3/8,$
 $(51*\cos(561/1000)*\exp(-99/200))/40 - (9*\exp(-99/200)*\sin(561/1000))/8 + 3/8,$
 $(51*\cos(1139/2000)*\exp(-201/400))/40 - (9*\exp(-201/400)*\sin(1139/2000))/8 + 3/8,$
 $(51*\cos(289/500)*\exp(-51/100))/40 - (9*\exp(-51/100)*\sin(289/500))/8 + 3/8,$
 $(51*\cos(1173/2000)*\exp(-207/400))/40 - (9*\exp(-207/400)*\sin(1173/2000))/8 + 3/8,$
 $(51*\cos(119/200)*\exp(-21/40))/40 - (9*\exp(-21/40)*\sin(119/200))/8 + 3/8,$
 $(51*\cos(1207/2000)*\exp(-213/400))/40 - (9*\exp(-213/400)*\sin(1207/2000))/8 + 3/8,$
 $(51*\cos(153/250)*\exp(-27/50))/40 - (9*\exp(-27/50)*\sin(153/250))/8 + 3/8,$
 $(51*\cos(1241/2000)*\exp(-219/400))/40 - (9*\exp(-219/400)*\sin(1241/2000))/8 + 3/8,$
 $(51*\cos(629/1000)*\exp(-111/200))/40 - (9*\exp(-111/200)*\sin(629/1000))/8 + 3/8,$

$(51 \cdot \cos(51/80) \cdot \exp(-9/16))/40 - (9 \cdot \exp(-9/16) \cdot \sin(51/80))/8 + 3/8,$
 $(51 \cdot \cos(323/500) \cdot \exp(-57/100))/40 - (9 \cdot \exp(-57/100) \cdot \sin(323/500))/8 + 3/8,$
 $(51 \cdot \cos(1309/2000) \cdot \exp(-231/400))/40 - (9 \cdot \exp(-231/400) \cdot \sin(1309/2000))/8 + 3/8,$
 $(51 \cdot \cos(663/1000) \cdot \exp(-117/200))/40 - (9 \cdot \exp(-117/200) \cdot \sin(663/1000))/8 + 3/8,$
 $(51 \cdot \cos(1343/2000) \cdot \exp(-237/400))/40 - (9 \cdot \exp(-237/400) \cdot \sin(1343/2000))/8 + 3/8,$
 $(51 \cdot \cos(17/25) \cdot \exp(-3/5))/40 - (9 \cdot \exp(-3/5) \cdot \sin(17/25))/8 + 3/8,$
 $(51 \cdot \cos(1377/2000) \cdot \exp(-243/400))/40 - (9 \cdot \exp(-243/400) \cdot \sin(1377/2000))/8 + 3/8,$
 $(51 \cdot \cos(697/1000) \cdot \exp(-123/200))/40 - (9 \cdot \exp(-123/200) \cdot \sin(697/1000))/8 + 3/8,$
 $(51 \cdot \cos(1411/2000) \cdot \exp(-249/400))/40 - (9 \cdot \exp(-249/400) \cdot \sin(1411/2000))/8 + 3/8,$
 $(51 \cdot \cos(357/500) \cdot \exp(-63/100))/40 - (9 \cdot \exp(-63/100) \cdot \sin(357/500))/8 + 3/8,$
 $(51 \cdot \cos(289/400) \cdot \exp(-51/80))/40 - (9 \cdot \exp(-51/80) \cdot \sin(289/400))/8 + 3/8,$
 $(51 \cdot \cos(731/1000) \cdot \exp(-129/200))/40 - (9 \cdot \exp(-129/200) \cdot \sin(731/1000))/8 + 3/8,$
 $(51 \cdot \cos(1479/2000) \cdot \exp(-261/400))/40 - (9 \cdot \exp(-261/400) \cdot \sin(1479/2000))/8 + 3/8,$
 $(51 \cdot \cos(187/250) \cdot \exp(-33/50))/40 - (9 \cdot \exp(-33/50) \cdot \sin(187/250))/8 + 3/8,$
 $(51 \cdot \cos(1513/2000) \cdot \exp(-267/400))/40 - (9 \cdot \exp(-267/400) \cdot \sin(1513/2000))/8 + 3/8,$
 $(51 \cdot \cos(153/200) \cdot \exp(-27/40))/40 - (9 \cdot \exp(-27/40) \cdot \sin(153/200))/8 + 3/8,$
 $(51 \cdot \cos(1547/2000) \cdot \exp(-273/400))/40 - (9 \cdot \exp(-273/400) \cdot \sin(1547/2000))/8 + 3/8,$
 $(51 \cdot \cos(391/500) \cdot \exp(-69/100))/40 - (9 \cdot \exp(-69/100) \cdot \sin(391/500))/8 + 3/8,$
 $(51 \cdot \cos(1581/2000) \cdot \exp(-279/400))/40 - (9 \cdot \exp(-279/400) \cdot \sin(1581/2000))/8 + 3/8,$
 $(51 \cdot \cos(799/1000) \cdot \exp(-141/200))/40 - (9 \cdot \exp(-141/200) \cdot \sin(799/1000))/8 + 3/8,$
 $(51 \cdot \cos(323/400) \cdot \exp(-57/80))/40 - (9 \cdot \exp(-57/80) \cdot \sin(323/400))/8 + 3/8,$
 $(51 \cdot \cos(102/125) \cdot \exp(-18/25))/40 - (9 \cdot \exp(-18/25) \cdot \sin(102/125))/8 + 3/8,$
 $(51 \cdot \cos(1649/2000) \cdot \exp(-291/400))/40 - (9 \cdot \exp(-291/400) \cdot \sin(1649/2000))/8 + 3/8,$
 $(51 \cdot \cos(833/1000) \cdot \exp(-147/200))/40 - (9 \cdot \exp(-147/200) \cdot \sin(833/1000))/8 + 3/8,$
 $(51 \cdot \cos(1683/2000) \cdot \exp(-297/400))/40 - (9 \cdot \exp(-297/400) \cdot \sin(1683/2000))/8 + 3/8,$
 $(51 \cdot \cos(17/20) \cdot \exp(-3/4))/40 - (9 \cdot \exp(-3/4) \cdot \sin(17/20))/8 + 3/8,$
 $(51 \cdot \cos(1717/2000) \cdot \exp(-303/400))/40 - (9 \cdot \exp(-303/400) \cdot \sin(1717/2000))/8 + 3/8,$
 $(51 \cdot \cos(867/1000) \cdot \exp(-153/200))/40 - (9 \cdot \exp(-153/200) \cdot \sin(867/1000))/8 + 3/8,$
 $(51 \cdot \cos(1751/2000) \cdot \exp(-309/400))/40 - (9 \cdot \exp(-309/400) \cdot \sin(1751/2000))/8 + 3/8,$
 $(51 \cdot \cos(221/250) \cdot \exp(-39/50))/40 - (9 \cdot \exp(-39/50) \cdot \sin(221/250))/8 + 3/8,$
 $(51 \cdot \cos(357/400) \cdot \exp(-63/80))/40 - (9 \cdot \exp(-63/80) \cdot \sin(357/400))/8 + 3/8,$
 $(51 \cdot \cos(901/1000) \cdot \exp(-159/200))/40 - (9 \cdot \exp(-159/200) \cdot \sin(901/1000))/8 + 3/8,$
 $(51 \cdot \cos(1819/2000) \cdot \exp(-321/400))/40 - (9 \cdot \exp(-321/400) \cdot \sin(1819/2000))/8 + 3/8,$
 $(51 \cdot \cos(459/500) \cdot \exp(-81/100))/40 - (9 \cdot \exp(-81/100) \cdot \sin(459/500))/8 + 3/8,$
 $(51 \cdot \cos(1853/2000) \cdot \exp(-327/400))/40 - (9 \cdot \exp(-327/400) \cdot \sin(1853/2000))/8 + 3/8,$
 $(51 \cdot \cos(187/200) \cdot \exp(-33/40))/40 - (9 \cdot \exp(-33/40) \cdot \sin(187/200))/8 + 3/8,$
 $(51 \cdot \cos(1887/2000) \cdot \exp(-333/400))/40 - (9 \cdot \exp(-333/400) \cdot \sin(1887/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/125) \cdot \exp(-21/25))/40 - (9 \cdot \exp(-21/25) \cdot \sin(119/125))/8 + 3/8,$
 $(51 \cdot \cos(1921/2000) \cdot \exp(-339/400))/40 - (9 \cdot \exp(-339/400) \cdot \sin(1921/2000))/8 + 3/8,$
 $(51 \cdot \cos(969/1000) \cdot \exp(-171/200))/40 - (9 \cdot \exp(-171/200) \cdot \sin(969/1000))/8 + 3/8,$
 $(51 \cdot \cos(391/400) \cdot \exp(-69/80))/40 - (9 \cdot \exp(-69/80) \cdot \sin(391/400))/8 + 3/8,$
 $(51 \cdot \cos(493/500) \cdot \exp(-87/100))/40 - (9 \cdot \exp(-87/100) \cdot \sin(493/500))/8 + 3/8,$
 $(51 \cdot \cos(1989/2000) \cdot \exp(-351/400))/40 - (9 \cdot \exp(-351/400) \cdot \sin(1989/2000))/8 + 3/8,$
 $(51 \cdot \cos(1003/1000) \cdot \exp(-177/200))/40 - (9 \cdot \exp(-177/200) \cdot \sin(1003/1000))/8 + 3/8,$
 $(51 \cdot \cos(2023/2000) \cdot \exp(-357/400))/40 - (9 \cdot \exp(-357/400) \cdot \sin(2023/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/50) \cdot \exp(-9/10))/40 - (9 \cdot \exp(-9/10) \cdot \sin(51/50))/8 + 3/8,$
 $(51 \cdot \cos(2057/2000) \cdot \exp(-363/400))/40 - (9 \cdot \exp(-363/400) \cdot \sin(2057/2000))/8 + 3/8,$
 $(51 \cdot \cos(1037/1000) \cdot \exp(-183/200))/40 - (9 \cdot \exp(-183/200) \cdot \sin(1037/1000))/8 + 3/8,$
 $(51 \cdot \cos(2091/2000) \cdot \exp(-369/400))/40 - (9 \cdot \exp(-369/400) \cdot \sin(2091/2000))/8 + 3/8,$
 $(51 \cdot \cos(527/500) \cdot \exp(-93/100))/40 - (9 \cdot \exp(-93/100) \cdot \sin(527/500))/8 + 3/8,$
 $(51 \cdot \cos(17/16) \cdot \exp(-15/16))/40 - (9 \cdot \exp(-15/16) \cdot \sin(17/16))/8 + 3/8,$

$(51 \cdot \cos(1071/1000) \cdot \exp(-189/200))/40 - (9 \cdot \exp(-189/200) \cdot \sin(1071/1000))/8 + 3/8,$
 $(51 \cdot \cos(2159/2000) \cdot \exp(-381/400))/40 - (9 \cdot \exp(-381/400) \cdot \sin(2159/2000))/8 + 3/8,$
 $(51 \cdot \cos(136/125) \cdot \exp(-24/25))/40 - (9 \cdot \exp(-24/25) \cdot \sin(136/125))/8 + 3/8,$
 $(51 \cdot \cos(2193/2000) \cdot \exp(-387/400))/40 - (9 \cdot \exp(-387/400) \cdot \sin(2193/2000))/8 + 3/8,$
 $(51 \cdot \cos(221/200) \cdot \exp(-39/40))/40 - (9 \cdot \exp(-39/40) \cdot \sin(221/200))/8 + 3/8,$
 $(51 \cdot \cos(2227/2000) \cdot \exp(-393/400))/40 - (9 \cdot \exp(-393/400) \cdot \sin(2227/2000))/8 + 3/8,$
 $(51 \cdot \cos(561/500) \cdot \exp(-99/100))/40 - (9 \cdot \exp(-99/100) \cdot \sin(561/500))/8 + 3/8,$
 $(51 \cdot \cos(2261/2000) \cdot \exp(-399/400))/40 - (9 \cdot \exp(-399/400) \cdot \sin(2261/2000))/8 + 3/8,$
 $(51 \cdot \cos(1139/1000) \cdot \exp(-201/200))/40 - (9 \cdot \exp(-201/200) \cdot \sin(1139/1000))/8 + 3/8,$
 $(51 \cdot \cos(459/400) \cdot \exp(-81/80))/40 - (9 \cdot \exp(-81/80) \cdot \sin(459/400))/8 + 3/8,$
 $(51 \cdot \cos(289/250) \cdot \exp(-51/50))/40 - (9 \cdot \exp(-51/50) \cdot \sin(289/250))/8 + 3/8,$
 $(51 \cdot \cos(2329/2000) \cdot \exp(-411/400))/40 - (9 \cdot \exp(-411/400) \cdot \sin(2329/2000))/8 + 3/8,$
 $(51 \cdot \cos(1173/1000) \cdot \exp(-207/200))/40 - (9 \cdot \exp(-207/200) \cdot \sin(1173/1000))/8 + 3/8,$
 $(51 \cdot \cos(2363/2000) \cdot \exp(-417/400))/40 - (9 \cdot \exp(-417/400) \cdot \sin(2363/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/100) \cdot \exp(-21/20))/40 - (9 \cdot \exp(-21/20) \cdot \sin(119/100))/8 + 3/8,$
 $(51 \cdot \cos(2397/2000) \cdot \exp(-423/400))/40 - (9 \cdot \exp(-423/400) \cdot \sin(2397/2000))/8 + 3/8,$
 $(51 \cdot \cos(1207/1000) \cdot \exp(-213/200))/40 - (9 \cdot \exp(-213/200) \cdot \sin(1207/1000))/8 + 3/8,$
 $(51 \cdot \cos(2431/2000) \cdot \exp(-429/400))/40 - (9 \cdot \exp(-429/400) \cdot \sin(2431/2000))/8 + 3/8,$
 $(51 \cdot \cos(153/125) \cdot \exp(-27/25))/40 - (9 \cdot \exp(-27/25) \cdot \sin(153/125))/8 + 3/8,$
 $(51 \cdot \cos(493/400) \cdot \exp(-87/80))/40 - (9 \cdot \exp(-87/80) \cdot \sin(493/400))/8 + 3/8,$
 $(51 \cdot \cos(1241/1000) \cdot \exp(-219/200))/40 - (9 \cdot \exp(-219/200) \cdot \sin(1241/1000))/8 + 3/8,$
 $(51 \cdot \cos(2499/2000) \cdot \exp(-441/400))/40 - (9 \cdot \exp(-441/400) \cdot \sin(2499/2000))/8 + 3/8,$
 $(51 \cdot \cos(629/500) \cdot \exp(-111/100))/40 - (9 \cdot \exp(-111/100) \cdot \sin(629/500))/8 + 3/8,$
 $(51 \cdot \cos(2533/2000) \cdot \exp(-447/400))/40 - (9 \cdot \exp(-447/400) \cdot \sin(2533/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/40) \cdot \exp(-9/8))/40 - (9 \cdot \exp(-9/8) \cdot \sin(51/40))/8 + 3/8,$
 $(51 \cdot \cos(2567/2000) \cdot \exp(-453/400))/40 - (9 \cdot \exp(-453/400) \cdot \sin(2567/2000))/8 + 3/8,$
 $(51 \cdot \cos(323/250) \cdot \exp(-57/50))/40 - (9 \cdot \exp(-57/50) \cdot \sin(323/250))/8 + 3/8,$
 $(51 \cdot \cos(2601/2000) \cdot \exp(-459/400))/40 - (9 \cdot \exp(-459/400) \cdot \sin(2601/2000))/8 + 3/8,$
 $(51 \cdot \cos(1309/1000) \cdot \exp(-231/200))/40 - (9 \cdot \exp(-231/200) \cdot \sin(1309/1000))/8 + 3/8,$
 $(51 \cdot \cos(527/400) \cdot \exp(-93/80))/40 - (9 \cdot \exp(-93/80) \cdot \sin(527/400))/8 + 3/8,$
 $(51 \cdot \cos(663/500) \cdot \exp(-117/100))/40 - (9 \cdot \exp(-117/100) \cdot \sin(663/500))/8 + 3/8,$
 $(51 \cdot \cos(2669/2000) \cdot \exp(-471/400))/40 - (9 \cdot \exp(-471/400) \cdot \sin(2669/2000))/8 + 3/8,$
 $(51 \cdot \cos(1343/1000) \cdot \exp(-237/200))/40 - (9 \cdot \exp(-237/200) \cdot \sin(1343/1000))/8 + 3/8,$
 $(51 \cdot \cos(2703/2000) \cdot \exp(-477/400))/40 - (9 \cdot \exp(-477/400) \cdot \sin(2703/2000))/8 + 3/8,$
 $(51 \cdot \cos(34/25) \cdot \exp(-6/5))/40 - (9 \cdot \exp(-6/5) \cdot \sin(34/25))/8 + 3/8,$
 $(51 \cdot \cos(2737/2000) \cdot \exp(-483/400))/40 - (9 \cdot \exp(-483/400) \cdot \sin(2737/2000))/8 + 3/8,$
 $(51 \cdot \cos(1377/1000) \cdot \exp(-243/200))/40 - (9 \cdot \exp(-243/200) \cdot \sin(1377/1000))/8 + 3/8,$
 $(51 \cdot \cos(2771/2000) \cdot \exp(-489/400))/40 - (9 \cdot \exp(-489/400) \cdot \sin(2771/2000))/8 + 3/8,$
 $(51 \cdot \cos(697/500) \cdot \exp(-123/100))/40 - (9 \cdot \exp(-123/100) \cdot \sin(697/500))/8 + 3/8,$
 $(51 \cdot \cos(561/400) \cdot \exp(-99/80))/40 - (9 \cdot \exp(-99/80) \cdot \sin(561/400))/8 + 3/8,$
 $(51 \cdot \cos(1411/1000) \cdot \exp(-249/200))/40 - (9 \cdot \exp(-249/200) \cdot \sin(1411/1000))/8 + 3/8,$
 $(51 \cdot \cos(2839/2000) \cdot \exp(-501/400))/40 - (9 \cdot \exp(-501/400) \cdot \sin(2839/2000))/8 + 3/8,$
 $(51 \cdot \cos(357/250) \cdot \exp(-63/50))/40 - (9 \cdot \exp(-63/50) \cdot \sin(357/250))/8 + 3/8,$
 $(51 \cdot \cos(2873/2000) \cdot \exp(-507/400))/40 - (9 \cdot \exp(-507/400) \cdot \sin(2873/2000))/8 + 3/8,$
 $(51 \cdot \cos(289/200) \cdot \exp(-51/40))/40 - (9 \cdot \exp(-51/40) \cdot \sin(289/200))/8 + 3/8,$
 $(51 \cdot \cos(2907/2000) \cdot \exp(-513/400))/40 - (9 \cdot \exp(-513/400) \cdot \sin(2907/2000))/8 + 3/8,$
 $(51 \cdot \cos(731/500) \cdot \exp(-129/100))/40 - (9 \cdot \exp(-129/100) \cdot \sin(731/500))/8 + 3/8,$
 $(51 \cdot \cos(2941/2000) \cdot \exp(-519/400))/40 - (9 \cdot \exp(-519/400) \cdot \sin(2941/2000))/8 + 3/8,$
 $(51 \cdot \cos(1479/1000) \cdot \exp(-261/200))/40 - (9 \cdot \exp(-261/200) \cdot \sin(1479/1000))/8 + 3/8,$
 $(51 \cdot \cos(119/80) \cdot \exp(-21/16))/40 - (9 \cdot \exp(-21/16) \cdot \sin(119/80))/8 + 3/8,$
 $(51 \cdot \cos(187/125) \cdot \exp(-33/25))/40 - (9 \cdot \exp(-33/25) \cdot \sin(187/125))/8 + 3/8,$

$(51 \cdot \cos(3009/2000) \cdot \exp(-531/400)) / 40 - (9 \cdot \exp(-531/400) \cdot \sin(3009/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1513/1000) \cdot \exp(-267/200)) / 40 - (9 \cdot \exp(-267/200) \cdot \sin(1513/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3043/2000) \cdot \exp(-537/400)) / 40 - (9 \cdot \exp(-537/400) \cdot \sin(3043/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(153/100) \cdot \exp(-27/20)) / 40 - (9 \cdot \exp(-27/20) \cdot \sin(153/100)) / 8 + 3/8,$
 $(51 \cdot \cos(3077/2000) \cdot \exp(-543/400)) / 40 - (9 \cdot \exp(-543/400) \cdot \sin(3077/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1547/1000) \cdot \exp(-273/200)) / 40 - (9 \cdot \exp(-273/200) \cdot \sin(1547/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3111/2000) \cdot \exp(-549/400)) / 40 - (9 \cdot \exp(-549/400) \cdot \sin(3111/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(391/250) \cdot \exp(-69/50)) / 40 - (9 \cdot \exp(-69/50) \cdot \sin(391/250)) / 8 + 3/8,$
 $(51 \cdot \cos(629/400) \cdot \exp(-111/80)) / 40 - (9 \cdot \exp(-111/80) \cdot \sin(629/400)) / 8 + 3/8,$
 $(51 \cdot \cos(1581/1000) \cdot \exp(-279/200)) / 40 - (9 \cdot \exp(-279/200) \cdot \sin(1581/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3179/2000) \cdot \exp(-561/400)) / 40 - (9 \cdot \exp(-561/400) \cdot \sin(3179/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(799/500) \cdot \exp(-141/100)) / 40 - (9 \cdot \exp(-141/100) \cdot \sin(799/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3213/2000) \cdot \exp(-567/400)) / 40 - (9 \cdot \exp(-567/400) \cdot \sin(3213/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(323/200) \cdot \exp(-57/40)) / 40 - (9 \cdot \exp(-57/40) \cdot \sin(323/200)) / 8 + 3/8,$
 $(51 \cdot \cos(3247/2000) \cdot \exp(-573/400)) / 40 - (9 \cdot \exp(-573/400) \cdot \sin(3247/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(204/125) \cdot \exp(-36/25)) / 40 - (9 \cdot \exp(-36/25) \cdot \sin(204/125)) / 8 + 3/8,$
 $(51 \cdot \cos(3281/2000) \cdot \exp(-579/400)) / 40 - (9 \cdot \exp(-579/400) \cdot \sin(3281/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1649/1000) \cdot \exp(-291/200)) / 40 - (9 \cdot \exp(-291/200) \cdot \sin(1649/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(663/400) \cdot \exp(-117/80)) / 40 - (9 \cdot \exp(-117/80) \cdot \sin(663/400)) / 8 + 3/8,$
 $(51 \cdot \cos(833/500) \cdot \exp(-147/100)) / 40 - (9 \cdot \exp(-147/100) \cdot \sin(833/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3349/2000) \cdot \exp(-591/400)) / 40 - (9 \cdot \exp(-591/400) \cdot \sin(3349/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1683/1000) \cdot \exp(-297/200)) / 40 - (9 \cdot \exp(-297/200) \cdot \sin(1683/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3383/2000) \cdot \exp(-597/400)) / 40 - (9 \cdot \exp(-597/400) \cdot \sin(3383/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(17/10) \cdot \exp(-3/2)) / 40 - (9 \cdot \exp(-3/2) \cdot \sin(17/10)) / 8 + 3/8,$
 $(51 \cdot \cos(3417/2000) \cdot \exp(-603/400)) / 40 - (9 \cdot \exp(-603/400) \cdot \sin(3417/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1717/1000) \cdot \exp(-303/200)) / 40 - (9 \cdot \exp(-303/200) \cdot \sin(1717/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3451/2000) \cdot \exp(-609/400)) / 40 - (9 \cdot \exp(-609/400) \cdot \sin(3451/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(867/500) \cdot \exp(-153/100)) / 40 - (9 \cdot \exp(-153/100) \cdot \sin(867/500)) / 8 + 3/8,$
 $(51 \cdot \cos(697/400) \cdot \exp(-123/80)) / 40 - (9 \cdot \exp(-123/80) \cdot \sin(697/400)) / 8 + 3/8,$
 $(51 \cdot \cos(1751/1000) \cdot \exp(-309/200)) / 40 - (9 \cdot \exp(-309/200) \cdot \sin(1751/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3519/2000) \cdot \exp(-621/400)) / 40 - (9 \cdot \exp(-621/400) \cdot \sin(3519/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(221/125) \cdot \exp(-39/25)) / 40 - (9 \cdot \exp(-39/25) \cdot \sin(221/125)) / 8 + 3/8,$
 $(51 \cdot \cos(3553/2000) \cdot \exp(-627/400)) / 40 - (9 \cdot \exp(-627/400) \cdot \sin(3553/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(357/200) \cdot \exp(-63/40)) / 40 - (9 \cdot \exp(-63/40) \cdot \sin(357/200)) / 8 + 3/8,$
 $(51 \cdot \cos(3587/2000) \cdot \exp(-633/400)) / 40 - (9 \cdot \exp(-633/400) \cdot \sin(3587/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(901/500) \cdot \exp(-159/100)) / 40 - (9 \cdot \exp(-159/100) \cdot \sin(901/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3621/2000) \cdot \exp(-639/400)) / 40 - (9 \cdot \exp(-639/400) \cdot \sin(3621/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1819/1000) \cdot \exp(-321/200)) / 40 - (9 \cdot \exp(-321/200) \cdot \sin(1819/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(731/400) \cdot \exp(-129/80)) / 40 - (9 \cdot \exp(-129/80) \cdot \sin(731/400)) / 8 + 3/8,$
 $(51 \cdot \cos(459/250) \cdot \exp(-81/50)) / 40 - (9 \cdot \exp(-81/50) \cdot \sin(459/250)) / 8 + 3/8,$
 $(51 \cdot \cos(3689/2000) \cdot \exp(-651/400)) / 40 - (9 \cdot \exp(-651/400) \cdot \sin(3689/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1853/1000) \cdot \exp(-327/200)) / 40 - (9 \cdot \exp(-327/200) \cdot \sin(1853/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3723/2000) \cdot \exp(-657/400)) / 40 - (9 \cdot \exp(-657/400) \cdot \sin(3723/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(187/100) \cdot \exp(-33/20)) / 40 - (9 \cdot \exp(-33/20) \cdot \sin(187/100)) / 8 + 3/8,$
 $(51 \cdot \cos(3757/2000) \cdot \exp(-663/400)) / 40 - (9 \cdot \exp(-663/400) \cdot \sin(3757/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1887/1000) \cdot \exp(-333/200)) / 40 - (9 \cdot \exp(-333/200) \cdot \sin(1887/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3791/2000) \cdot \exp(-669/400)) / 40 - (9 \cdot \exp(-669/400) \cdot \sin(3791/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(238/125) \cdot \exp(-42/25)) / 40 - (9 \cdot \exp(-42/25) \cdot \sin(238/125)) / 8 + 3/8,$
 $(51 \cdot \cos(153/80) \cdot \exp(-27/16)) / 40 - (9 \cdot \exp(-27/16) \cdot \sin(153/80)) / 8 + 3/8,$
 $(51 \cdot \cos(1921/1000) \cdot \exp(-339/200)) / 40 - (9 \cdot \exp(-339/200) \cdot \sin(1921/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3859/2000) \cdot \exp(-681/400)) / 40 - (9 \cdot \exp(-681/400) \cdot \sin(3859/2000)) / 8 + 3/8,$

$(51*\cos(969/500)*\exp(-171/100))/40 - (9*\exp(-171/100)*\sin(969/500))/8 + 3/8,$
 $(51*\cos(3893/2000)*\exp(-687/400))/40 - (9*\exp(-687/400)*\sin(3893/2000))/8 + 3/8,$
 $(51*\cos(391/200)*\exp(-69/40))/40 - (9*\exp(-69/40)*\sin(391/200))/8 + 3/8,$
 $(51*\cos(3927/2000)*\exp(-693/400))/40 - (9*\exp(-693/400)*\sin(3927/2000))/8 + 3/8,$
 $(51*\cos(493/250)*\exp(-87/50))/40 - (9*\exp(-87/50)*\sin(493/250))/8 + 3/8,$
 $(51*\cos(3961/2000)*\exp(-699/400))/40 - (9*\exp(-699/400)*\sin(3961/2000))/8 + 3/8,$
 $(51*\cos(1989/1000)*\exp(-351/200))/40 - (9*\exp(-351/200)*\sin(1989/1000))/8 + 3/8,$
 $(51*\cos(799/400)*\exp(-141/80))/40 - (9*\exp(-141/80)*\sin(799/400))/8 + 3/8,$
 $(51*\cos(1003/500)*\exp(-177/100))/40 - (9*\exp(-177/100)*\sin(1003/500))/8 + 3/8,$
 $(51*\cos(4029/2000)*\exp(-711/400))/40 - (9*\exp(-711/400)*\sin(4029/2000))/8 + 3/8,$
 $(51*\cos(2023/1000)*\exp(-357/200))/40 - (9*\exp(-357/200)*\sin(2023/1000))/8 + 3/8,$
 $(51*\cos(4063/2000)*\exp(-717/400))/40 - (9*\exp(-717/400)*\sin(4063/2000))/8 + 3/8,$
 $(51*\cos(51/25)*\exp(-9/5))/40 - (9*\exp(-9/5)*\sin(51/25))/8 + 3/8,$
 $(51*\cos(4097/2000)*\exp(-723/400))/40 - (9*\exp(-723/400)*\sin(4097/2000))/8 + 3/8,$
 $(51*\cos(2057/1000)*\exp(-363/200))/40 - (9*\exp(-363/200)*\sin(2057/1000))/8 + 3/8,$
 $(51*\cos(4131/2000)*\exp(-729/400))/40 - (9*\exp(-729/400)*\sin(4131/2000))/8 + 3/8,$
 $(51*\cos(1037/500)*\exp(-183/100))/40 - (9*\exp(-183/100)*\sin(1037/500))/8 + 3/8,$
 $(51*\cos(833/400)*\exp(-147/80))/40 - (9*\exp(-147/80)*\sin(833/400))/8 + 3/8,$
 $(51*\cos(2091/1000)*\exp(-369/200))/40 - (9*\exp(-369/200)*\sin(2091/1000))/8 + 3/8,$
 $(51*\cos(4199/2000)*\exp(-741/400))/40 - (9*\exp(-741/400)*\sin(4199/2000))/8 + 3/8,$
 $(51*\cos(527/250)*\exp(-93/50))/40 - (9*\exp(-93/50)*\sin(527/250))/8 + 3/8,$
 $(51*\cos(4233/2000)*\exp(-747/400))/40 - (9*\exp(-747/400)*\sin(4233/2000))/8 + 3/8,$
 $(51*\cos(17/8)*\exp(-15/8))/40 - (9*\exp(-15/8)*\sin(17/8))/8 + 3/8]$

dk =

$-(153*\cos((17*t)/20)*\exp(-(3*t)/4))/80 - (6*\sin((17*t)/20)*\exp(-(3*t)/4))/25$

kk =

$[-153/80, -(153*\cos(17/2000)*\exp(-3/400))/80 - (6*\exp(-3/400)*\sin(17/2000))/25, -$
 $(153*\cos(17/1000)*\exp(-3/200))/80 - (6*\exp(-3/200)*\sin(17/1000))/25, -$
 $(153*\cos(51/2000)*\exp(-9/400))/80 - (6*\exp(-9/400)*\sin(51/2000))/25, -$
 $(153*\cos(17/500)*\exp(-3/100))/80 - (6*\exp(-3/100)*\sin(17/500))/25, -$
 $(153*\cos(17/400)*\exp(-3/80))/80 - (6*\exp(-3/80)*\sin(17/400))/25, -$
 $(153*\cos(51/1000)*\exp(-9/200))/80 - (6*\exp(-9/200)*\sin(51/1000))/25, -$
 $(153*\cos(119/2000)*\exp(-21/400))/80 - (6*\exp(-21/400)*\sin(119/2000))/25, -$

(153*cos(17/250)*exp(-3/50))/80 - (6*exp(-3/50)*sin(17/250))/25, -
(153*cos(153/2000)*exp(-27/400))/80 - (6*exp(-27/400)*sin(153/2000))/25, -
(153*cos(17/200)*exp(-3/40))/80 - (6*exp(-3/40)*sin(17/200))/25, -
(153*cos(187/2000)*exp(-33/400))/80 - (6*exp(-33/400)*sin(187/2000))/25, -
(153*cos(51/500)*exp(-9/100))/80 - (6*exp(-9/100)*sin(51/500))/25, -
(153*cos(221/2000)*exp(-39/400))/80 - (6*exp(-39/400)*sin(221/2000))/25, -
(153*cos(119/1000)*exp(-21/200))/80 - (6*exp(-21/200)*sin(119/1000))/25, -
(153*cos(51/400)*exp(-9/80))/80 - (6*exp(-9/80)*sin(51/400))/25, -
(153*cos(17/125)*exp(-3/25))/80 - (6*exp(-3/25)*sin(17/125))/25, -
(153*cos(289/2000)*exp(-51/400))/80 - (6*exp(-51/400)*sin(289/2000))/25, -
(153*cos(153/1000)*exp(-27/200))/80 - (6*exp(-27/200)*sin(153/1000))/25, -
(153*cos(323/2000)*exp(-57/400))/80 - (6*exp(-57/400)*sin(323/2000))/25, -
(153*cos(17/100)*exp(-3/20))/80 - (6*exp(-3/20)*sin(17/100))/25, -
(153*cos(357/2000)*exp(-63/400))/80 - (6*exp(-63/400)*sin(357/2000))/25, -
(153*cos(187/1000)*exp(-33/200))/80 - (6*exp(-33/200)*sin(187/1000))/25, -
(153*cos(391/2000)*exp(-69/400))/80 - (6*exp(-69/400)*sin(391/2000))/25, -
(153*cos(51/250)*exp(-9/50))/80 - (6*exp(-9/50)*sin(51/250))/25, -
(153*cos(17/80)*exp(-3/16))/80 - (6*exp(-3/16)*sin(17/80))/25, -
(153*cos(221/1000)*exp(-39/200))/80 - (6*exp(-39/200)*sin(221/1000))/25, -
(153*cos(459/2000)*exp(-81/400))/80 - (6*exp(-81/400)*sin(459/2000))/25, -
(153*cos(119/500)*exp(-21/100))/80 - (6*exp(-21/100)*sin(119/500))/25, -
(153*cos(493/2000)*exp(-87/400))/80 - (6*exp(-87/400)*sin(493/2000))/25, -
(153*cos(51/200)*exp(-9/40))/80 - (6*exp(-9/40)*sin(51/200))/25, -
(153*cos(527/2000)*exp(-93/400))/80 - (6*exp(-93/400)*sin(527/2000))/25, -
(153*cos(34/125)*exp(-6/25))/80 - (6*exp(-6/25)*sin(34/125))/25, -
(153*cos(561/2000)*exp(-99/400))/80 - (6*exp(-99/400)*sin(561/2000))/25, -
(153*cos(289/1000)*exp(-51/200))/80 - (6*exp(-51/200)*sin(289/1000))/25, -
(153*cos(119/400)*exp(-21/80))/80 - (6*exp(-21/80)*sin(119/400))/25, -
(153*cos(153/500)*exp(-27/100))/80 - (6*exp(-27/100)*sin(153/500))/25, -
(153*cos(629/2000)*exp(-111/400))/80 - (6*exp(-111/400)*sin(629/2000))/25, -
(153*cos(323/1000)*exp(-57/200))/80 - (6*exp(-57/200)*sin(323/1000))/25, -
(153*cos(663/2000)*exp(-117/400))/80 - (6*exp(-117/400)*sin(663/2000))/25, -
(153*cos(17/50)*exp(-3/10))/80 - (6*exp(-3/10)*sin(17/50))/25, -
(153*cos(697/2000)*exp(-123/400))/80 - (6*exp(-123/400)*sin(697/2000))/25, -
(153*cos(357/1000)*exp(-63/200))/80 - (6*exp(-63/200)*sin(357/1000))/25, -
(153*cos(731/2000)*exp(-129/400))/80 - (6*exp(-129/400)*sin(731/2000))/25, -
(153*cos(187/500)*exp(-33/100))/80 - (6*exp(-33/100)*sin(187/500))/25, -
(153*cos(153/400)*exp(-27/80))/80 - (6*exp(-27/80)*sin(153/400))/25, -
(153*cos(391/1000)*exp(-69/200))/80 - (6*exp(-69/200)*sin(391/1000))/25, -
(153*cos(799/2000)*exp(-141/400))/80 - (6*exp(-141/400)*sin(799/2000))/25, -
(153*cos(51/125)*exp(-9/25))/80 - (6*exp(-9/25)*sin(51/125))/25, -
(153*cos(833/2000)*exp(-147/400))/80 - (6*exp(-147/400)*sin(833/2000))/25, -
(153*cos(17/40)*exp(-3/8))/80 - (6*exp(-3/8)*sin(17/40))/25, -
(153*cos(867/2000)*exp(-153/400))/80 - (6*exp(-153/400)*sin(867/2000))/25, -
(153*cos(221/500)*exp(-39/100))/80 - (6*exp(-39/100)*sin(221/500))/25, -
(153*cos(901/2000)*exp(-159/400))/80 - (6*exp(-159/400)*sin(901/2000))/25, -
(153*cos(459/1000)*exp(-81/200))/80 - (6*exp(-81/200)*sin(459/1000))/25, -
(153*cos(187/400)*exp(-33/80))/80 - (6*exp(-33/80)*sin(187/400))/25, -
(153*cos(119/250)*exp(-21/50))/80 - (6*exp(-21/50)*sin(119/250))/25, -
(153*cos(969/2000)*exp(-171/400))/80 - (6*exp(-171/400)*sin(969/2000))/25, -
(153*cos(493/1000)*exp(-87/200))/80 - (6*exp(-87/200)*sin(493/1000))/25, -

(153*cos(1003/2000)*exp(-177/400))/80 - (6*exp(-177/400)*sin(1003/2000))/25, -
(153*cos(51/100)*exp(-9/20))/80 - (6*exp(-9/20)*sin(51/100))/25, -
(153*cos(1037/2000)*exp(-183/400))/80 - (6*exp(-183/400)*sin(1037/2000))/25, -
(153*cos(527/1000)*exp(-93/200))/80 - (6*exp(-93/200)*sin(527/1000))/25, -
(153*cos(1071/2000)*exp(-189/400))/80 - (6*exp(-189/400)*sin(1071/2000))/25, -
(153*cos(68/125)*exp(-12/25))/80 - (6*exp(-12/25)*sin(68/125))/25, -
(153*cos(221/400)*exp(-39/80))/80 - (6*exp(-39/80)*sin(221/400))/25, -
(153*cos(561/1000)*exp(-99/200))/80 - (6*exp(-99/200)*sin(561/1000))/25, -
(153*cos(1139/2000)*exp(-201/400))/80 - (6*exp(-201/400)*sin(1139/2000))/25, -
(153*cos(289/500)*exp(-51/100))/80 - (6*exp(-51/100)*sin(289/500))/25, -
(153*cos(1173/2000)*exp(-207/400))/80 - (6*exp(-207/400)*sin(1173/2000))/25, -
(153*cos(119/200)*exp(-21/40))/80 - (6*exp(-21/40)*sin(119/200))/25, -
(153*cos(1207/2000)*exp(-213/400))/80 - (6*exp(-213/400)*sin(1207/2000))/25, -
(153*cos(153/250)*exp(-27/50))/80 - (6*exp(-27/50)*sin(153/250))/25, -
(153*cos(1241/2000)*exp(-219/400))/80 - (6*exp(-219/400)*sin(1241/2000))/25, -
(153*cos(629/1000)*exp(-111/200))/80 - (6*exp(-111/200)*sin(629/1000))/25, -
(153*cos(51/80)*exp(-9/16))/80 - (6*exp(-9/16)*sin(51/80))/25, -
(153*cos(323/500)*exp(-57/100))/80 - (6*exp(-57/100)*sin(323/500))/25, -
(153*cos(1309/2000)*exp(-231/400))/80 - (6*exp(-231/400)*sin(1309/2000))/25, -
(153*cos(663/1000)*exp(-117/200))/80 - (6*exp(-117/200)*sin(663/1000))/25, -
(153*cos(1343/2000)*exp(-237/400))/80 - (6*exp(-237/400)*sin(1343/2000))/25, -
(153*cos(17/25)*exp(-3/5))/80 - (6*exp(-3/5)*sin(17/25))/25, -
(153*cos(1377/2000)*exp(-243/400))/80 - (6*exp(-243/400)*sin(1377/2000))/25, -
(153*cos(697/1000)*exp(-123/200))/80 - (6*exp(-123/200)*sin(697/1000))/25, -
(153*cos(1411/2000)*exp(-249/400))/80 - (6*exp(-249/400)*sin(1411/2000))/25, -
(153*cos(357/500)*exp(-63/100))/80 - (6*exp(-63/100)*sin(357/500))/25, -
(153*cos(289/400)*exp(-51/80))/80 - (6*exp(-51/80)*sin(289/400))/25, -
(153*cos(731/1000)*exp(-129/200))/80 - (6*exp(-129/200)*sin(731/1000))/25, -
(153*cos(1479/2000)*exp(-261/400))/80 - (6*exp(-261/400)*sin(1479/2000))/25, -
(153*cos(187/250)*exp(-33/50))/80 - (6*exp(-33/50)*sin(187/250))/25, -
(153*cos(1513/2000)*exp(-267/400))/80 - (6*exp(-267/400)*sin(1513/2000))/25, -
(153*cos(153/200)*exp(-27/40))/80 - (6*exp(-27/40)*sin(153/200))/25, -
(153*cos(1547/2000)*exp(-273/400))/80 - (6*exp(-273/400)*sin(1547/2000))/25, -
(153*cos(391/500)*exp(-69/100))/80 - (6*exp(-69/100)*sin(391/500))/25, -
(153*cos(1581/2000)*exp(-279/400))/80 - (6*exp(-279/400)*sin(1581/2000))/25, -
(153*cos(799/1000)*exp(-141/200))/80 - (6*exp(-141/200)*sin(799/1000))/25, -
(153*cos(323/400)*exp(-57/80))/80 - (6*exp(-57/80)*sin(323/400))/25, -
(153*cos(102/125)*exp(-18/25))/80 - (6*exp(-18/25)*sin(102/125))/25, -
(153*cos(1649/2000)*exp(-291/400))/80 - (6*exp(-291/400)*sin(1649/2000))/25, -
(153*cos(833/1000)*exp(-147/200))/80 - (6*exp(-147/200)*sin(833/1000))/25, -
(153*cos(1683/2000)*exp(-297/400))/80 - (6*exp(-297/400)*sin(1683/2000))/25, -
(153*cos(17/20)*exp(-3/4))/80 - (6*exp(-3/4)*sin(17/20))/25, -
(153*cos(1717/2000)*exp(-303/400))/80 - (6*exp(-303/400)*sin(1717/2000))/25, -
(153*cos(867/1000)*exp(-153/200))/80 - (6*exp(-153/200)*sin(867/1000))/25, -
(153*cos(1751/2000)*exp(-309/400))/80 - (6*exp(-309/400)*sin(1751/2000))/25, -
(153*cos(221/250)*exp(-39/50))/80 - (6*exp(-39/50)*sin(221/250))/25, -
(153*cos(357/400)*exp(-63/80))/80 - (6*exp(-63/80)*sin(357/400))/25, -
(153*cos(901/1000)*exp(-159/200))/80 - (6*exp(-159/200)*sin(901/1000))/25, -
(153*cos(1819/2000)*exp(-321/400))/80 - (6*exp(-321/400)*sin(1819/2000))/25, -
(153*cos(459/500)*exp(-81/100))/80 - (6*exp(-81/100)*sin(459/500))/25, -
(153*cos(1853/2000)*exp(-327/400))/80 - (6*exp(-327/400)*sin(1853/2000))/25, -

(153*cos(187/200)*exp(-33/40))/80 - (6*exp(-33/40)*sin(187/200))/25, -
(153*cos(1887/2000)*exp(-333/400))/80 - (6*exp(-333/400)*sin(1887/2000))/25, -
(153*cos(119/125)*exp(-21/25))/80 - (6*exp(-21/25)*sin(119/125))/25, -
(153*cos(1921/2000)*exp(-339/400))/80 - (6*exp(-339/400)*sin(1921/2000))/25, -
(153*cos(969/1000)*exp(-171/200))/80 - (6*exp(-171/200)*sin(969/1000))/25, -
(153*cos(391/400)*exp(-69/80))/80 - (6*exp(-69/80)*sin(391/400))/25, -
(153*cos(493/500)*exp(-87/100))/80 - (6*exp(-87/100)*sin(493/500))/25, -
(153*cos(1989/2000)*exp(-351/400))/80 - (6*exp(-351/400)*sin(1989/2000))/25, -
(153*cos(1003/1000)*exp(-177/200))/80 - (6*exp(-177/200)*sin(1003/1000))/25, -
(153*cos(2023/2000)*exp(-357/400))/80 - (6*exp(-357/400)*sin(2023/2000))/25, -
(153*cos(51/50)*exp(-9/10))/80 - (6*exp(-9/10)*sin(51/50))/25, -
(153*cos(2057/2000)*exp(-363/400))/80 - (6*exp(-363/400)*sin(2057/2000))/25, -
(153*cos(1037/1000)*exp(-183/200))/80 - (6*exp(-183/200)*sin(1037/1000))/25, -
(153*cos(2091/2000)*exp(-369/400))/80 - (6*exp(-369/400)*sin(2091/2000))/25, -
(153*cos(527/500)*exp(-93/100))/80 - (6*exp(-93/100)*sin(527/500))/25, -
(153*cos(17/16)*exp(-15/16))/80 - (6*exp(-15/16)*sin(17/16))/25, -
(153*cos(1071/1000)*exp(-189/200))/80 - (6*exp(-189/200)*sin(1071/1000))/25, -
(153*cos(2159/2000)*exp(-381/400))/80 - (6*exp(-381/400)*sin(2159/2000))/25, -
(153*cos(136/125)*exp(-24/25))/80 - (6*exp(-24/25)*sin(136/125))/25, -
(153*cos(2193/2000)*exp(-387/400))/80 - (6*exp(-387/400)*sin(2193/2000))/25, -
(153*cos(221/200)*exp(-39/40))/80 - (6*exp(-39/40)*sin(221/200))/25, -
(153*cos(2227/2000)*exp(-393/400))/80 - (6*exp(-393/400)*sin(2227/2000))/25, -
(153*cos(561/500)*exp(-99/100))/80 - (6*exp(-99/100)*sin(561/500))/25, -
(153*cos(2261/2000)*exp(-399/400))/80 - (6*exp(-399/400)*sin(2261/2000))/25, -
(153*cos(1139/1000)*exp(-201/200))/80 - (6*exp(-201/200)*sin(1139/1000))/25, -
(153*cos(459/400)*exp(-81/80))/80 - (6*exp(-81/80)*sin(459/400))/25, -
(153*cos(289/250)*exp(-51/50))/80 - (6*exp(-51/50)*sin(289/250))/25, -
(153*cos(2329/2000)*exp(-411/400))/80 - (6*exp(-411/400)*sin(2329/2000))/25, -
(153*cos(1173/1000)*exp(-207/200))/80 - (6*exp(-207/200)*sin(1173/1000))/25, -
(153*cos(2363/2000)*exp(-417/400))/80 - (6*exp(-417/400)*sin(2363/2000))/25, -
(153*cos(119/100)*exp(-21/20))/80 - (6*exp(-21/20)*sin(119/100))/25, -
(153*cos(2397/2000)*exp(-423/400))/80 - (6*exp(-423/400)*sin(2397/2000))/25, -
(153*cos(1207/1000)*exp(-213/200))/80 - (6*exp(-213/200)*sin(1207/1000))/25, -
(153*cos(2431/2000)*exp(-429/400))/80 - (6*exp(-429/400)*sin(2431/2000))/25, -
(153*cos(153/125)*exp(-27/25))/80 - (6*exp(-27/25)*sin(153/125))/25, -
(153*cos(493/400)*exp(-87/80))/80 - (6*exp(-87/80)*sin(493/400))/25, -
(153*cos(1241/1000)*exp(-219/200))/80 - (6*exp(-219/200)*sin(1241/1000))/25, -
(153*cos(2499/2000)*exp(-441/400))/80 - (6*exp(-441/400)*sin(2499/2000))/25, -
(153*cos(629/500)*exp(-111/100))/80 - (6*exp(-111/100)*sin(629/500))/25, -
(153*cos(2533/2000)*exp(-447/400))/80 - (6*exp(-447/400)*sin(2533/2000))/25, -
(153*cos(51/40)*exp(-9/8))/80 - (6*exp(-9/8)*sin(51/40))/25, -
(153*cos(2567/2000)*exp(-453/400))/80 - (6*exp(-453/400)*sin(2567/2000))/25, -
(153*cos(323/250)*exp(-57/50))/80 - (6*exp(-57/50)*sin(323/250))/25, -
(153*cos(2601/2000)*exp(-459/400))/80 - (6*exp(-459/400)*sin(2601/2000))/25, -
(153*cos(1309/1000)*exp(-231/200))/80 - (6*exp(-231/200)*sin(1309/1000))/25, -
(153*cos(527/400)*exp(-93/80))/80 - (6*exp(-93/80)*sin(527/400))/25, -
(153*cos(663/500)*exp(-117/100))/80 - (6*exp(-117/100)*sin(663/500))/25, -
(153*cos(2669/2000)*exp(-471/400))/80 - (6*exp(-471/400)*sin(2669/2000))/25, -
(153*cos(1343/1000)*exp(-237/200))/80 - (6*exp(-237/200)*sin(1343/1000))/25, -
(153*cos(2703/2000)*exp(-477/400))/80 - (6*exp(-477/400)*sin(2703/2000))/25, -
(153*cos(34/25)*exp(-6/5))/80 - (6*exp(-6/5)*sin(34/25))/25, -

(153*cos(2737/2000)*exp(-483/400))/80 - (6*exp(-483/400)*sin(2737/2000))/25, -
(153*cos(1377/1000)*exp(-243/200))/80 - (6*exp(-243/200)*sin(1377/1000))/25, -
(153*cos(2771/2000)*exp(-489/400))/80 - (6*exp(-489/400)*sin(2771/2000))/25, -
(153*cos(697/500)*exp(-123/100))/80 - (6*exp(-123/100)*sin(697/500))/25, -
(153*cos(561/400)*exp(-99/80))/80 - (6*exp(-99/80)*sin(561/400))/25, -
(153*cos(1411/1000)*exp(-249/200))/80 - (6*exp(-249/200)*sin(1411/1000))/25, -
(153*cos(2839/2000)*exp(-501/400))/80 - (6*exp(-501/400)*sin(2839/2000))/25, -
(153*cos(357/250)*exp(-63/50))/80 - (6*exp(-63/50)*sin(357/250))/25, -
(153*cos(2873/2000)*exp(-507/400))/80 - (6*exp(-507/400)*sin(2873/2000))/25, -
(153*cos(289/200)*exp(-51/40))/80 - (6*exp(-51/40)*sin(289/200))/25, -
(153*cos(2907/2000)*exp(-513/400))/80 - (6*exp(-513/400)*sin(2907/2000))/25, -
(153*cos(731/500)*exp(-129/100))/80 - (6*exp(-129/100)*sin(731/500))/25, -
(153*cos(2941/2000)*exp(-519/400))/80 - (6*exp(-519/400)*sin(2941/2000))/25, -
(153*cos(1479/1000)*exp(-261/200))/80 - (6*exp(-261/200)*sin(1479/1000))/25, -
(153*cos(119/80)*exp(-21/16))/80 - (6*exp(-21/16)*sin(119/80))/25, -
(153*cos(187/125)*exp(-33/25))/80 - (6*exp(-33/25)*sin(187/125))/25, -
(153*cos(3009/2000)*exp(-531/400))/80 - (6*exp(-531/400)*sin(3009/2000))/25, -
(153*cos(1513/1000)*exp(-267/200))/80 - (6*exp(-267/200)*sin(1513/1000))/25, -
(153*cos(3043/2000)*exp(-537/400))/80 - (6*exp(-537/400)*sin(3043/2000))/25, -
(153*cos(153/100)*exp(-27/20))/80 - (6*exp(-27/20)*sin(153/100))/25, -
(153*cos(3077/2000)*exp(-543/400))/80 - (6*exp(-543/400)*sin(3077/2000))/25, -
(153*cos(1547/1000)*exp(-273/200))/80 - (6*exp(-273/200)*sin(1547/1000))/25, -
(153*cos(3111/2000)*exp(-549/400))/80 - (6*exp(-549/400)*sin(3111/2000))/25, -
(153*cos(391/250)*exp(-69/50))/80 - (6*exp(-69/50)*sin(391/250))/25, -
(153*cos(629/400)*exp(-111/80))/80 - (6*exp(-111/80)*sin(629/400))/25, -
(153*cos(1581/1000)*exp(-279/200))/80 - (6*exp(-279/200)*sin(1581/1000))/25, -
(153*cos(3179/2000)*exp(-561/400))/80 - (6*exp(-561/400)*sin(3179/2000))/25, -
(153*cos(799/500)*exp(-141/100))/80 - (6*exp(-141/100)*sin(799/500))/25, -
(153*cos(3213/2000)*exp(-567/400))/80 - (6*exp(-567/400)*sin(3213/2000))/25, -
(153*cos(323/200)*exp(-57/40))/80 - (6*exp(-57/40)*sin(323/200))/25, -
(153*cos(3247/2000)*exp(-573/400))/80 - (6*exp(-573/400)*sin(3247/2000))/25, -
(153*cos(204/125)*exp(-36/25))/80 - (6*exp(-36/25)*sin(204/125))/25, -
(153*cos(3281/2000)*exp(-579/400))/80 - (6*exp(-579/400)*sin(3281/2000))/25, -
(153*cos(1649/1000)*exp(-291/200))/80 - (6*exp(-291/200)*sin(1649/1000))/25, -
(153*cos(663/400)*exp(-117/80))/80 - (6*exp(-117/80)*sin(663/400))/25, -
(153*cos(833/500)*exp(-147/100))/80 - (6*exp(-147/100)*sin(833/500))/25, -
(153*cos(3349/2000)*exp(-591/400))/80 - (6*exp(-591/400)*sin(3349/2000))/25, -
(153*cos(1683/1000)*exp(-297/200))/80 - (6*exp(-297/200)*sin(1683/1000))/25, -
(153*cos(3383/2000)*exp(-597/400))/80 - (6*exp(-597/400)*sin(3383/2000))/25, -
(153*cos(17/10)*exp(-3/2))/80 - (6*exp(-3/2)*sin(17/10))/25, -
(153*cos(3417/2000)*exp(-603/400))/80 - (6*exp(-603/400)*sin(3417/2000))/25, -
(153*cos(1717/1000)*exp(-303/200))/80 - (6*exp(-303/200)*sin(1717/1000))/25, -
(153*cos(3451/2000)*exp(-609/400))/80 - (6*exp(-609/400)*sin(3451/2000))/25, -
(153*cos(867/500)*exp(-153/100))/80 - (6*exp(-153/100)*sin(867/500))/25, -
(153*cos(697/400)*exp(-123/80))/80 - (6*exp(-123/80)*sin(697/400))/25, -
(153*cos(1751/1000)*exp(-309/200))/80 - (6*exp(-309/200)*sin(1751/1000))/25, -
(153*cos(3519/2000)*exp(-621/400))/80 - (6*exp(-621/400)*sin(3519/2000))/25, -
(153*cos(221/125)*exp(-39/25))/80 - (6*exp(-39/25)*sin(221/125))/25, -
(153*cos(3553/2000)*exp(-627/400))/80 - (6*exp(-627/400)*sin(3553/2000))/25, -
(153*cos(357/200)*exp(-63/40))/80 - (6*exp(-63/40)*sin(357/200))/25, -
(153*cos(3587/2000)*exp(-633/400))/80 - (6*exp(-633/400)*sin(3587/2000))/25, -

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(153*cos(901/500)*exp(-159/100))/80 - (6*exp(-159/100)*sin(901/500))/25, -
(153*cos(3621/2000)*exp(-639/400))/80 - (6*exp(-639/400)*sin(3621/2000))/25, -
(153*cos(1819/1000)*exp(-321/200))/80 - (6*exp(-321/200)*sin(1819/1000))/25, -
(153*cos(731/400)*exp(-129/80))/80 - (6*exp(-129/80)*sin(731/400))/25, -
(153*cos(459/250)*exp(-81/50))/80 - (6*exp(-81/50)*sin(459/250))/25, -
(153*cos(3689/2000)*exp(-651/400))/80 - (6*exp(-651/400)*sin(3689/2000))/25, -
(153*cos(1853/1000)*exp(-327/200))/80 - (6*exp(-327/200)*sin(1853/1000))/25, -
(153*cos(3723/2000)*exp(-657/400))/80 - (6*exp(-657/400)*sin(3723/2000))/25, -
(153*cos(187/100)*exp(-33/20))/80 - (6*exp(-33/20)*sin(187/100))/25, -
(153*cos(3757/2000)*exp(-663/400))/80 - (6*exp(-663/400)*sin(3757/2000))/25, -
(153*cos(1887/1000)*exp(-333/200))/80 - (6*exp(-333/200)*sin(1887/1000))/25, -
(153*cos(3791/2000)*exp(-669/400))/80 - (6*exp(-669/400)*sin(3791/2000))/25, -
(153*cos(238/125)*exp(-42/25))/80 - (6*exp(-42/25)*sin(238/125))/25, -
(153*cos(153/80)*exp(-27/16))/80 - (6*exp(-27/16)*sin(153/80))/25, -
(153*cos(1921/1000)*exp(-339/200))/80 - (6*exp(-339/200)*sin(1921/1000))/25, -
(153*cos(3859/2000)*exp(-681/400))/80 - (6*exp(-681/400)*sin(3859/2000))/25, -
(153*cos(969/500)*exp(-171/100))/80 - (6*exp(-171/100)*sin(969/500))/25, -
(153*cos(3893/2000)*exp(-687/400))/80 - (6*exp(-687/400)*sin(3893/2000))/25, -
(153*cos(391/200)*exp(-69/40))/80 - (6*exp(-69/40)*sin(391/200))/25, -
(153*cos(3927/2000)*exp(-693/400))/80 - (6*exp(-693/400)*sin(3927/2000))/25, -
(153*cos(493/250)*exp(-87/50))/80 - (6*exp(-87/50)*sin(493/250))/25, -
(153*cos(3961/2000)*exp(-699/400))/80 - (6*exp(-699/400)*sin(3961/2000))/25, -
(153*cos(1989/1000)*exp(-351/200))/80 - (6*exp(-351/200)*sin(1989/1000))/25, -
(153*cos(799/400)*exp(-141/80))/80 - (6*exp(-141/80)*sin(799/400))/25, -
(153*cos(1003/500)*exp(-177/100))/80 - (6*exp(-177/100)*sin(1003/500))/25, -
(153*cos(4029/2000)*exp(-711/400))/80 - (6*exp(-711/400)*sin(4029/2000))/25, -
(153*cos(2023/1000)*exp(-357/200))/80 - (6*exp(-357/200)*sin(2023/1000))/25, -
(153*cos(4063/2000)*exp(-717/400))/80 - (6*exp(-717/400)*sin(4063/2000))/25, -
(153*cos(51/25)*exp(-9/5))/80 - (6*exp(-9/5)*sin(51/25))/25, -
(153*cos(4097/2000)*exp(-723/400))/80 - (6*exp(-723/400)*sin(4097/2000))/25, -
(153*cos(2057/1000)*exp(-363/200))/80 - (6*exp(-363/200)*sin(2057/1000))/25, -
(153*cos(4131/2000)*exp(-729/400))/80 - (6*exp(-729/400)*sin(4131/2000))/25, -
(153*cos(1037/500)*exp(-183/100))/80 - (6*exp(-183/100)*sin(1037/500))/25, -
(153*cos(833/400)*exp(-147/80))/80 - (6*exp(-147/80)*sin(833/400))/25, -
(153*cos(2091/1000)*exp(-369/200))/80 - (6*exp(-369/200)*sin(2091/1000))/25, -
(153*cos(4199/2000)*exp(-741/400))/80 - (6*exp(-741/400)*sin(4199/2000))/25, -
(153*cos(527/250)*exp(-93/50))/80 - (6*exp(-93/50)*sin(527/250))/25, -
(153*cos(4233/2000)*exp(-747/400))/80 - (6*exp(-747/400)*sin(4233/2000))/25, -
(153*cos(17/8)*exp(-15/8))/80 - (6*exp(-15/8)*sin(17/8))/25]

```

EDITOR

```
commandwindow

clear

clc

A=[0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,16,-10]

lingie=A^-1

B=[-4;2;6;4]

X=A^-1*B
```

COMMANDWINDOW

A =

```
    0    10     4    -2
   -3   -17     1     2
    1     1     1     0
    8   -34    16   -10
```

lingie =

Columns 1 through 3

```
-1.785714285714286e-01   -1.020408163265306e-01   5.714285714285715e-01
```

3.571428571428571e-02	-1.530612244897960e-02	3.571428571428570e-02
1.428571428571429e-01	1.173469387755102e-01	3.928571428571429e-01
-3.571428571428570e-02	1.581632653061224e-01	9.642857142857143e-01

Column 4

1.530612244897960e-02
-1.020408163265306e-02
-5.102040816326529e-03
-6.122448979591838e-02

B =

-4
2
6
4

X =

4.000000000000001e+00
-9.714451465470120e-17

2.0000000000000000e+00

6.0000000000000000e+00

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Editor

Commandwindow

```
clear
```

```
clc
```

```
syms x
```

```
y=5*power(sin(5*x),5)
```

```
Z=(y^2*pi)
```

```
Zintd=int(Z,0,pi)
```

```
Zint=double(Zintd)
```

CommandWindow

y =

$$5 \sin(5x)^5$$

Z =

$$25\pi \sin(5x)^{10}$$

Zintd =

$$(1575\pi^2)/256$$

Zint =

6.072119895201461e+01

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