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MATRIC NO:16/ENG03/018

DEPARTMENT:CIVIL ENGINEERING

LEVEL:200

1

INPUT:

```
commandwindow
clear
clc
a= [0, 10, 4, -2;-3, -17, 1, 2; 1, 1, 1, 0;8, -34, 16, -10]
n = [4 ;2 ;6; 4]
d = inv(a)
s= d*n
```

OUTPUT

```
commandwindow
clear
clc
a= [0, 10, 4, -2;-3, -17, 1, 2; 1, 1, 1, 0;8, -34, 16, -10]
n = [4 ;2 ;6; 4]
d = inv(a)
s= d*n
```

2

INPUT

```
commandwindow
clear
clc
syms t
d = 1.5*exp(-0.75*t)*sin(0.85*t) + 0.375*t
tn = [0:0.01:2.5]
v = diff(d)
vn = subs(v,tn)
a = diff(v)
an = subs(a,tn)
plot (tn,vn,tn,an)
grid on
grid minor
xlabel('time (min)')
ylabel('variable')
legend('velocity (m/min)', 'acceleration (m/min^2)')
```

OUTPUT

d =

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

tn =

Columns 1 through 8

	0	0.0100	0.0200	0.0300	0.0400	0.0500	
0.0600	0.0700						

Columns 9 through 16

	0.0800	0.0900	0.1000	0.1100	0.1200	0.1300	
0.1400	0.1500						

Columns 17 through 24

	0.1600	0.1700	0.1800	0.1900	0.2000	0.2100	
0.2200	0.2300						

Columns 25 through 32

	0.2400	0.2500	0.2600	0.2700	0.2800	0.2900	
0.3000	0.3100						

Columns 33 through 40

	0.3200	0.3300	0.3400	0.3500	0.3600	0.3700	
0.3800	0.3900						

Columns 41 through 48

	0.4000	0.4100	0.4200	0.4300	0.4400	0.4500	
0.4600	0.4700						

Columns 49 through 56

	0.4800	0.4900	0.5000	0.5100	0.5200	0.5300	
0.5400	0.5500						

Columns 57 through 64

0.5600	0.5700	0.5800	0.5900	0.6000	0.6100
0.6200	0.6300				

Columns 65 through 72

0.6400	0.6500	0.6600	0.6700	0.6800	0.6900
0.7000	0.7100				

Columns 73 through 80

0.7200	0.7300	0.7400	0.7500	0.7600	0.7700
0.7800	0.7900				

Columns 81 through 88

0.8000	0.8100	0.8200	0.8300	0.8400	0.8500
0.8600	0.8700				

Columns 89 through 96

0.8800	0.8900	0.9000	0.9100	0.9200	0.9300
0.9400	0.9500				

Columns 97 through 104

0.9600	0.9700	0.9800	0.9900	1.0000	1.0100
1.0200	1.0300				

Columns 105 through 112

1.0400	1.0500	1.0600	1.0700	1.0800	1.0900
1.1000	1.1100				

Columns 113 through 120

1.1200	1.1300	1.1400	1.1500	1.1600	1.1700
1.1800	1.1900				

Columns 121 through 128

1.2000	1.2100	1.2200	1.2300	1.2400	1.2500
1.2600	1.2700				

Columns 129 through 136

1.2800 1.2900 1.3000 1.3100 1.3200 1.3300
1.3400 1.3500

Columns 137 through 144

1.3600 1.3700 1.3800 1.3900 1.4000 1.4100
1.4200 1.4300

Columns 145 through 152

1.4400 1.4500 1.4600 1.4700 1.4800 1.4900
1.5000 1.5100

Columns 153 through 160

1.5200 1.5300 1.5400 1.5500 1.5600 1.5700
1.5800 1.5900

Columns 161 through 168

1.6000 1.6100 1.6200 1.6300 1.6400 1.6500
1.6600 1.6700

Columns 169 through 176

1.6800 1.6900 1.7000 1.7100 1.7200 1.7300
1.7400 1.7500

Columns 177 through 184

1.7600 1.7700 1.7800 1.7900 1.8000 1.8100
1.8200 1.8300

Columns 185 through 192

1.8400 1.8500 1.8600 1.8700 1.8800 1.8900
1.9000 1.9100

Columns 193 through 200

1.9200 1.9300 1.9400 1.9500 1.9600 1.9700
1.9800 1.9900

Columns 201 through 208

2.0000 2.0100 2.0200 2.0300 2.0400 2.0500
2.0600 2.0700

Columns 209 through 216

2.0800 2.0900 2.1000 2.1100 2.1200 2.1300
2.1400 2.1500

Columns 217 through 224

2.1600 2.1700 2.1800 2.1900 2.2000 2.2100
2.2200 2.2300

Columns 225 through 232

2.2400 2.2500 2.2600 2.2700 2.2800 2.2900
2.3000 2.3100

Columns 233 through 240

2.3200 2.3300 2.3400 2.3500 2.3600 2.3700
2.3800 2.3900

Columns 241 through 248

2.4000 2.4100 2.4200 2.4300 2.4400 2.4500
2.4600 2.4700

Columns 249 through 251

2.4800 2.4900 2.5000

v =

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

vn =

[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(-

$$\begin{aligned}
& 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(-
\end{aligned}$$

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

$3/8, (51*\cos(323/500)*\exp(-57/100))/40 - (9*\exp(-57/100)*\sin(323/500))/8 + 3/8, (51*\cos(1309/2000)*\exp(-231/400))/40 - (9*\exp(-231/400)*\sin(1309/2000))/8 + 3/8, (51*\cos(663/1000)*\exp(-117/200))/40 - (9*\exp(-117/200)*\sin(663/1000))/8 + 3/8, (51*\cos(1343/2000)*\exp(-237/400))/40 - (9*\exp(-237/400)*\sin(1343/2000))/8 + 3/8, (51*\cos(17/25)*\exp(-3/5))/40 - (9*\exp(-3/5)*\sin(17/25))/8 + 3/8, (51*\cos(1377/2000)*\exp(-243/400))/40 - (9*\exp(-243/400)*\sin(1377/2000))/8 + 3/8, (51*\cos(697/1000)*\exp(-123/200))/40 - (9*\exp(-123/200)*\sin(697/1000))/8 + 3/8, (51*\cos(1411/2000)*\exp(-249/400))/40 - (9*\exp(-249/400)*\sin(1411/2000))/8 + 3/8, (51*\cos(357/500)*\exp(-63/100))/40 - (9*\exp(-63/100)*\sin(357/500))/8 + 3/8, (51*\cos(289/400)*\exp(-51/80))/40 - (9*\exp(-51/80)*\sin(289/400))/8 + 3/8, (51*\cos(731/1000)*\exp(-129/200))/40 - (9*\exp(-129/200)*\sin(731/1000))/8 + 3/8, (51*\cos(1479/2000)*\exp(-261/400))/40 - (9*\exp(-261/400)*\sin(1479/2000))/8 + 3/8, (51*\cos(187/250)*\exp(-33/50))/40 - (9*\exp(-33/50)*\sin(187/250))/8 + 3/8, (51*\cos(1513/2000)*\exp(-267/400))/40 - (9*\exp(-267/400)*\sin(1513/2000))/8 + 3/8, (51*\cos(153/200)*\exp(-27/40))/40 - (9*\exp(-27/40)*\sin(153/200))/8 + 3/8, (51*\cos(1547/2000)*\exp(-273/400))/40 - (9*\exp(-273/400)*\sin(1547/2000))/8 + 3/8, (51*\cos(391/500)*\exp(-69/100))/40 - (9*\exp(-69/100)*\sin(391/500))/8 + 3/8, (51*\cos(1581/2000)*\exp(-279/400))/40 - (9*\exp(-279/400)*\sin(1581/2000))/8 + 3/8, (51*\cos(799/1000)*\exp(-141/200))/40 - (9*\exp(-141/200)*\sin(799/1000))/8 + 3/8, (51*\cos(323/400)*\exp(-57/80))/40 - (9*\exp(-57/80)*\sin(323/400))/8 + 3/8, (51*\cos(102/125)*\exp(-18/25))/40 - (9*\exp(-18/25)*\sin(102/125))/8 + 3/8, (51*\cos(1649/2000)*\exp(-291/400))/40 - (9*\exp(-291/400)*\sin(1649/2000))/8 + 3/8, (51*\cos(833/1000)*\exp(-147/200))/40 - (9*\exp(-147/200)*\sin(833/1000))/8 + 3/8, (51*\cos(1683/2000)*\exp(-297/400))/40 - (9*\exp(-297/400)*\sin(1683/2000))/8 + 3/8, (51*\cos(17/20)*\exp(-3/4))/40 - (9*\exp(-3/4)*\sin(17/20))/8 + 3/8, (51*\cos(1717/2000)*\exp(-303/400))/40 - (9*\exp(-303/400)*\sin(1717/2000))/8 + 3/8, (51*\cos(867/1000)*\exp(-153/200))/40 - (9*\exp(-153/200)*\sin(867/1000))/8 + 3/8, (51*\cos(1751/2000)*\exp(-309/400))/40 - (9*\exp(-309/400)*\sin(1751/2000))/8 + 3/8, (51*\cos(221/250)*\exp(-39/50))/40 - (9*\exp(-39/50)*\sin(221/250))/8 + 3/8, (51*\cos(357/400)*\exp(-63/80))/40 - (9*\exp(-63/80)*\sin(357/400))/8 + 3/8, (51*\cos(901/1000)*\exp(-159/200))/40 - (9*\exp(-159/200)*\sin(901/1000))/8 + 3/8, (51*\cos(1819/2000)*\exp(-321/400))/40 - (9*\exp(-321/400)*\sin(1819/2000))/8 + 3/8, (51*\cos(459/500)*\exp(-$

$81/100)/40 - (9*\exp(-81/100)*\sin(459/500))/8 + 3/8,$
 $(51*\cos(1853/2000)*\exp(-327/400))/40 - (9*\exp(-$
 $327/400)*\sin(1853/2000))/8 + 3/8, (51*\cos(187/200)*\exp(-$
 $33/40))/40 - (9*\exp(-33/40)*\sin(187/200))/8 + 3/8,$
 $(51*\cos(1887/2000)*\exp(-333/400))/40 - (9*\exp(-$
 $333/400)*\sin(1887/2000))/8 + 3/8, (51*\cos(119/125)*\exp(-$
 $21/25))/40 - (9*\exp(-21/25)*\sin(119/125))/8 + 3/8,$
 $(51*\cos(1921/2000)*\exp(-339/400))/40 - (9*\exp(-$
 $339/400)*\sin(1921/2000))/8 + 3/8, (51*\cos(969/1000)*\exp(-$
 $171/200))/40 - (9*\exp(-171/200)*\sin(969/1000))/8 + 3/8,$
 $(51*\cos(391/400)*\exp(-69/80))/40 - (9*\exp(-$
 $69/80)*\sin(391/400))/8 + 3/8, (51*\cos(493/500)*\exp(-87/100))/40$
 $- (9*\exp(-87/100)*\sin(493/500))/8 + 3/8,$
 $(51*\cos(1989/2000)*\exp(-351/400))/40 - (9*\exp(-$
 $351/400)*\sin(1989/2000))/8 + 3/8, (51*\cos(1003/1000)*\exp(-$
 $177/200))/40 - (9*\exp(-177/200)*\sin(1003/1000))/8 + 3/8,$
 $(51*\cos(2023/2000)*\exp(-357/400))/40 - (9*\exp(-$
 $357/400)*\sin(2023/2000))/8 + 3/8, (51*\cos(51/50)*\exp(-9/10))/40$
 $- (9*\exp(-9/10)*\sin(51/50))/8 + 3/8, (51*\cos(2057/2000)*\exp(-$
 $363/400))/40 - (9*\exp(-363/400)*\sin(2057/2000))/8 + 3/8,$
 $(51*\cos(1037/1000)*\exp(-183/200))/40 - (9*\exp(-$
 $183/200)*\sin(1037/1000))/8 + 3/8, (51*\cos(2091/2000)*\exp(-$
 $369/400))/40 - (9*\exp(-369/400)*\sin(2091/2000))/8 + 3/8,$
 $(51*\cos(527/500)*\exp(-93/100))/40 - (9*\exp(-$
 $93/100)*\sin(527/500))/8 + 3/8, (51*\cos(17/16)*\exp(-15/16))/40 -$
 $(9*\exp(-15/16)*\sin(17/16))/8 + 3/8, (51*\cos(1071/1000)*\exp(-$
 $189/200))/40 - (9*\exp(-189/200)*\sin(1071/1000))/8 + 3/8,$
 $(51*\cos(2159/2000)*\exp(-381/400))/40 - (9*\exp(-$
 $381/400)*\sin(2159/2000))/8 + 3/8, (51*\cos(136/125)*\exp(-$
 $24/25))/40 - (9*\exp(-24/25)*\sin(136/125))/8 + 3/8,$
 $(51*\cos(2193/2000)*\exp(-387/400))/40 - (9*\exp(-$
 $387/400)*\sin(2193/2000))/8 + 3/8, (51*\cos(221/200)*\exp(-$
 $39/40))/40 - (9*\exp(-39/40)*\sin(221/200))/8 + 3/8,$
 $(51*\cos(2227/2000)*\exp(-393/400))/40 - (9*\exp(-$
 $393/400)*\sin(2227/2000))/8 + 3/8, (51*\cos(561/500)*\exp(-$
 $99/100))/40 - (9*\exp(-99/100)*\sin(561/500))/8 + 3/8,$
 $(51*\cos(2261/2000)*\exp(-399/400))/40 - (9*\exp(-$
 $399/400)*\sin(2261/2000))/8 + 3/8, (51*\cos(1139/1000)*\exp(-$
 $201/200))/40 - (9*\exp(-201/200)*\sin(1139/1000))/8 + 3/8,$
 $(51*\cos(459/400)*\exp(-81/80))/40 - (9*\exp(-$
 $81/80)*\sin(459/400))/8 + 3/8, (51*\cos(289/250)*\exp(-51/50))/40 -$
 $(9*\exp(-51/50)*\sin(289/250))/8 + 3/8, (51*\cos(2329/2000)*\exp(-$
 $411/400))/40 - (9*\exp(-411/400)*\sin(2329/2000))/8 + 3/8,$
 $(51*\cos(1173/1000)*\exp(-207/200))/40 - (9*\exp(-$
 $207/200)*\sin(1173/1000))/8 + 3/8, (51*\cos(2363/2000)*\exp(-$
 $417/400))/40 - (9*\exp(-417/400)*\sin(2363/2000))/8 + 3/8,$
 $(51*\cos(119/100)*\exp(-21/20))/40 - (9*\exp(-$

$21/20) * \sin(119/100)) / 8 + 3/8, (51 * \cos(2397/2000) * \exp(-423/400)) / 40 - (9 * \exp(-423/400) * \sin(2397/2000)) / 8 + 3/8,$
 $(51 * \cos(1207/1000) * \exp(-213/200)) / 40 - (9 * \exp(-213/200) * \sin(1207/1000)) / 8 + 3/8, (51 * \cos(2431/2000) * \exp(-429/400)) / 40 - (9 * \exp(-429/400) * \sin(2431/2000)) / 8 + 3/8,$
 $(51 * \cos(153/125) * \exp(-27/25)) / 40 - (9 * \exp(-27/25) * \sin(153/125)) / 8 + 3/8, (51 * \cos(493/400) * \exp(-87/80)) / 40 - (9 * \exp(-87/80) * \sin(493/400)) / 8 + 3/8, (51 * \cos(1241/1000) * \exp(-219/200)) / 40 - (9 * \exp(-219/200) * \sin(1241/1000)) / 8 + 3/8,$
 $(51 * \cos(2499/2000) * \exp(-441/400)) / 40 - (9 * \exp(-441/400) * \sin(2499/2000)) / 8 + 3/8, (51 * \cos(629/500) * \exp(-111/100)) / 40 - (9 * \exp(-111/100) * \sin(629/500)) / 8 + 3/8,$
 $(51 * \cos(2533/2000) * \exp(-447/400)) / 40 - (9 * \exp(-447/400) * \sin(2533/2000)) / 8 + 3/8, (51 * \cos(51/40) * \exp(-9/8)) / 40 - (9 * \exp(-9/8) * \sin(51/40)) / 8 + 3/8, (51 * \cos(2567/2000) * \exp(-453/400)) / 40 - (9 * \exp(-453/400) * \sin(2567/2000)) / 8 + 3/8,$
 $(51 * \cos(323/250) * \exp(-57/50)) / 40 - (9 * \exp(-57/50) * \sin(323/250)) / 8 + 3/8, (51 * \cos(2601/2000) * \exp(-459/400)) / 40 - (9 * \exp(-459/400) * \sin(2601/2000)) / 8 + 3/8,$
 $(51 * \cos(1309/1000) * \exp(-231/200)) / 40 - (9 * \exp(-231/200) * \sin(1309/1000)) / 8 + 3/8, (51 * \cos(527/400) * \exp(-93/80)) / 40 - (9 * \exp(-93/80) * \sin(527/400)) / 8 + 3/8,$
 $(51 * \cos(663/500) * \exp(-117/100)) / 40 - (9 * \exp(-117/100) * \sin(663/500)) / 8 + 3/8, (51 * \cos(2669/2000) * \exp(-471/400)) / 40 - (9 * \exp(-471/400) * \sin(2669/2000)) / 8 + 3/8,$
 $(51 * \cos(1343/1000) * \exp(-237/200)) / 40 - (9 * \exp(-237/200) * \sin(1343/1000)) / 8 + 3/8, (51 * \cos(2703/2000) * \exp(-477/400)) / 40 - (9 * \exp(-477/400) * \sin(2703/2000)) / 8 + 3/8,$
 $(51 * \cos(34/25) * \exp(-6/5)) / 40 - (9 * \exp(-6/5) * \sin(34/25)) / 8 + 3/8, (51 * \cos(2737/2000) * \exp(-483/400)) / 40 - (9 * \exp(-483/400) * \sin(2737/2000)) / 8 + 3/8, (51 * \cos(1377/1000) * \exp(-243/200)) / 40 - (9 * \exp(-243/200) * \sin(1377/1000)) / 8 + 3/8,$
 $(51 * \cos(2771/2000) * \exp(-489/400)) / 40 - (9 * \exp(-489/400) * \sin(2771/2000)) / 8 + 3/8, (51 * \cos(697/500) * \exp(-123/100)) / 40 - (9 * \exp(-123/100) * \sin(697/500)) / 8 + 3/8,$
 $(51 * \cos(561/400) * \exp(-99/80)) / 40 - (9 * \exp(-99/80) * \sin(561/400)) / 8 + 3/8, (51 * \cos(1411/1000) * \exp(-249/200)) / 40 - (9 * \exp(-249/200) * \sin(1411/1000)) / 8 + 3/8,$
 $(51 * \cos(2839/2000) * \exp(-501/400)) / 40 - (9 * \exp(-501/400) * \sin(2839/2000)) / 8 + 3/8, (51 * \cos(357/250) * \exp(-63/50)) / 40 - (9 * \exp(-63/50) * \sin(357/250)) / 8 + 3/8,$
 $(51 * \cos(2873/2000) * \exp(-507/400)) / 40 - (9 * \exp(-507/400) * \sin(2873/2000)) / 8 + 3/8, (51 * \cos(289/200) * \exp(-51/40)) / 40 - (9 * \exp(-51/40) * \sin(289/200)) / 8 + 3/8,$
 $(51 * \cos(2907/2000) * \exp(-513/400)) / 40 - (9 * \exp(-513/400) * \sin(2907/2000)) / 8 + 3/8, (51 * \cos(731/500) * \exp(-129/100)) / 40 - (9 * \exp(-129/100) * \sin(731/500)) / 8 + 3/8,$

$(51 \cdot \cos(2941/2000) \cdot \exp(-519/400))/40 - (9 \cdot \exp(-519/400) \cdot \sin(2941/2000))/8 + 3/8,$
 $(51 \cdot \cos(1479/1000) \cdot \exp(-261/200))/40 - (9 \cdot \exp(-261/200) \cdot \sin(1479/1000))/8 + 3/8,$
 $(51 \cdot \cos(119/80) \cdot \exp(-21/16))/40 - (9 \cdot \exp(-21/16) \cdot \sin(119/80))/8 + 3/8,$
 $(51 \cdot \cos(187/125) \cdot \exp(-33/25))/40 - (9 \cdot \exp(-33/25) \cdot \sin(187/125))/8 + 3/8,$
 $(51 \cdot \cos(3009/2000) \cdot \exp(-531/400))/40 - (9 \cdot \exp(-531/400) \cdot \sin(3009/2000))/8 + 3/8,$
 $(51 \cdot \cos(1513/1000) \cdot \exp(-267/200))/40 - (9 \cdot \exp(-267/200) \cdot \sin(1513/1000))/8 + 3/8,$
 $(51 \cdot \cos(3043/2000) \cdot \exp(-537/400))/40 - (9 \cdot \exp(-537/400) \cdot \sin(3043/2000))/8 + 3/8,$
 $(51 \cdot \cos(153/100) \cdot \exp(-27/20))/40 - (9 \cdot \exp(-27/20) \cdot \sin(153/100))/8 + 3/8,$
 $(51 \cdot \cos(3077/2000) \cdot \exp(-543/400))/40 - (9 \cdot \exp(-543/400) \cdot \sin(3077/2000))/8 + 3/8,$
 $(51 \cdot \cos(1547/1000) \cdot \exp(-273/200))/40 - (9 \cdot \exp(-273/200) \cdot \sin(1547/1000))/8 + 3/8,$
 $(51 \cdot \cos(3111/2000) \cdot \exp(-549/400))/40 - (9 \cdot \exp(-549/400) \cdot \sin(3111/2000))/8 + 3/8,$
 $(51 \cdot \cos(391/250) \cdot \exp(-69/50))/40 - (9 \cdot \exp(-69/50) \cdot \sin(391/250))/8 + 3/8,$
 $(51 \cdot \cos(629/400) \cdot \exp(-111/80))/40 - (9 \cdot \exp(-111/80) \cdot \sin(629/400))/8 + 3/8,$
 $(51 \cdot \cos(1581/1000) \cdot \exp(-279/200))/40 - (9 \cdot \exp(-279/200) \cdot \sin(1581/1000))/8 + 3/8,$
 $(51 \cdot \cos(3179/2000) \cdot \exp(-561/400))/40 - (9 \cdot \exp(-561/400) \cdot \sin(3179/2000))/8 + 3/8,$
 $(51 \cdot \cos(799/500) \cdot \exp(-141/100))/40 - (9 \cdot \exp(-141/100) \cdot \sin(799/500))/8 + 3/8,$
 $(51 \cdot \cos(3213/2000) \cdot \exp(-567/400))/40 - (9 \cdot \exp(-567/400) \cdot \sin(3213/2000))/8 + 3/8,$
 $(51 \cdot \cos(323/200) \cdot \exp(-57/40))/40 - (9 \cdot \exp(-57/40) \cdot \sin(323/200))/8 + 3/8,$
 $(51 \cdot \cos(3247/2000) \cdot \exp(-573/400))/40 - (9 \cdot \exp(-573/400) \cdot \sin(3247/2000))/8 + 3/8,$
 $(51 \cdot \cos(204/125) \cdot \exp(-36/25))/40 - (9 \cdot \exp(-36/25) \cdot \sin(204/125))/8 + 3/8,$
 $(51 \cdot \cos(3281/2000) \cdot \exp(-579/400))/40 - (9 \cdot \exp(-579/400) \cdot \sin(3281/2000))/8 + 3/8,$
 $(51 \cdot \cos(1649/1000) \cdot \exp(-291/200))/40 - (9 \cdot \exp(-291/200) \cdot \sin(1649/1000))/8 + 3/8,$
 $(51 \cdot \cos(663/400) \cdot \exp(-117/80))/40 - (9 \cdot \exp(-117/80) \cdot \sin(663/400))/8 + 3/8,$
 $(51 \cdot \cos(833/500) \cdot \exp(-147/100))/40 - (9 \cdot \exp(-147/100) \cdot \sin(833/500))/8 + 3/8,$
 $(51 \cdot \cos(3349/2000) \cdot \exp(-591/400))/40 - (9 \cdot \exp(-591/400) \cdot \sin(3349/2000))/8 + 3/8,$
 $(51 \cdot \cos(1683/1000) \cdot \exp(-297/200))/40 - (9 \cdot \exp(-297/200) \cdot \sin(1683/1000))/8 + 3/8,$
 $(51 \cdot \cos(3383/2000) \cdot \exp(-597/400))/40 - (9 \cdot \exp(-597/400) \cdot \sin(3383/2000))/8 + 3/8,$
 $(51 \cdot \cos(17/10) \cdot \exp(-3/2))/40 - (9 \cdot \exp(-3/2) \cdot \sin(17/10))/8 + 3/8,$
 $(51 \cdot \cos(3417/2000) \cdot \exp(-603/400))/40 - (9 \cdot \exp(-603/400) \cdot \sin(3417/2000))/8 + 3/8,$
 $(51 \cdot \cos(1717/1000) \cdot \exp(-303/200))/40 - (9 \cdot \exp(-303/200) \cdot \sin(1717/1000))/8 + 3/8,$
 $(51 \cdot \cos(3451/2000) \cdot \exp(-609/400))/40 - (9 \cdot \exp(-609/400) \cdot \sin(3451/2000))/8 + 3/8,$
 $(51 \cdot \cos(867/500) \cdot \exp(-153/100))/40 - (9 \cdot \exp(-153/100) \cdot \sin(867/500))/8 + 3/8,$

$(51 \cdot \cos(697/400) \cdot \exp(-123/80))/40 - (9 \cdot \exp(-123/80) \cdot \sin(697/400))/8 + 3/8,$
 $(51 \cdot \cos(1751/1000) \cdot \exp(-309/200))/40 - (9 \cdot \exp(-309/200) \cdot \sin(1751/1000))/8 + 3/8,$
 $(51 \cdot \cos(3519/2000) \cdot \exp(-621/400))/40 - (9 \cdot \exp(-621/400) \cdot \sin(3519/2000))/8 + 3/8,$
 $(51 \cdot \cos(221/125) \cdot \exp(-39/25))/40 - (9 \cdot \exp(-39/25) \cdot \sin(221/125))/8 + 3/8,$
 $(51 \cdot \cos(3553/2000) \cdot \exp(-627/400))/40 - (9 \cdot \exp(-627/400) \cdot \sin(3553/2000))/8 + 3/8,$
 $(51 \cdot \cos(357/200) \cdot \exp(-63/40))/40 - (9 \cdot \exp(-63/40) \cdot \sin(357/200))/8 + 3/8,$
 $(51 \cdot \cos(3587/2000) \cdot \exp(-633/400))/40 - (9 \cdot \exp(-633/400) \cdot \sin(3587/2000))/8 + 3/8,$
 $(51 \cdot \cos(901/500) \cdot \exp(-159/100))/40 - (9 \cdot \exp(-159/100) \cdot \sin(901/500))/8 + 3/8,$
 $(51 \cdot \cos(3621/2000) \cdot \exp(-639/400))/40 - (9 \cdot \exp(-639/400) \cdot \sin(3621/2000))/8 + 3/8,$
 $(51 \cdot \cos(1819/1000) \cdot \exp(-321/200))/40 - (9 \cdot \exp(-321/200) \cdot \sin(1819/1000))/8 + 3/8,$
 $(51 \cdot \cos(731/400) \cdot \exp(-129/80))/40 - (9 \cdot \exp(-129/80) \cdot \sin(731/400))/8 + 3/8,$
 $(51 \cdot \cos(459/250) \cdot \exp(-81/50))/40 - (9 \cdot \exp(-81/50) \cdot \sin(459/250))/8 + 3/8,$
 $(51 \cdot \cos(3689/2000) \cdot \exp(-651/400))/40 - (9 \cdot \exp(-651/400) \cdot \sin(3689/2000))/8 + 3/8,$
 $(51 \cdot \cos(1853/1000) \cdot \exp(-327/200))/40 - (9 \cdot \exp(-327/200) \cdot \sin(1853/1000))/8 + 3/8,$
 $(51 \cdot \cos(3723/2000) \cdot \exp(-657/400))/40 - (9 \cdot \exp(-657/400) \cdot \sin(3723/2000))/8 + 3/8,$
 $(51 \cdot \cos(187/100) \cdot \exp(-33/20))/40 - (9 \cdot \exp(-33/20) \cdot \sin(187/100))/8 + 3/8,$
 $(51 \cdot \cos(3757/2000) \cdot \exp(-663/400))/40 - (9 \cdot \exp(-663/400) \cdot \sin(3757/2000))/8 + 3/8,$
 $(51 \cdot \cos(1887/1000) \cdot \exp(-333/200))/40 - (9 \cdot \exp(-333/200) \cdot \sin(1887/1000))/8 + 3/8,$
 $(51 \cdot \cos(3791/2000) \cdot \exp(-669/400))/40 - (9 \cdot \exp(-669/400) \cdot \sin(3791/2000))/8 + 3/8,$
 $(51 \cdot \cos(238/125) \cdot \exp(-42/25))/40 - (9 \cdot \exp(-42/25) \cdot \sin(238/125))/8 + 3/8,$
 $(51 \cdot \cos(153/80) \cdot \exp(-27/16))/40 - (9 \cdot \exp(-27/16) \cdot \sin(153/80))/8 + 3/8,$
 $(51 \cdot \cos(1921/1000) \cdot \exp(-339/200))/40 - (9 \cdot \exp(-339/200) \cdot \sin(1921/1000))/8 + 3/8,$
 $(51 \cdot \cos(3859/2000) \cdot \exp(-681/400))/40 - (9 \cdot \exp(-681/400) \cdot \sin(3859/2000))/8 + 3/8,$
 $(51 \cdot \cos(969/500) \cdot \exp(-171/100))/40 - (9 \cdot \exp(-171/100) \cdot \sin(969/500))/8 + 3/8,$
 $(51 \cdot \cos(3893/2000) \cdot \exp(-687/400))/40 - (9 \cdot \exp(-687/400) \cdot \sin(3893/2000))/8 + 3/8,$
 $(51 \cdot \cos(391/200) \cdot \exp(-69/40))/40 - (9 \cdot \exp(-69/40) \cdot \sin(391/200))/8 + 3/8,$
 $(51 \cdot \cos(3927/2000) \cdot \exp(-693/400))/40 - (9 \cdot \exp(-693/400) \cdot \sin(3927/2000))/8 + 3/8,$
 $(51 \cdot \cos(493/250) \cdot \exp(-87/50))/40 - (9 \cdot \exp(-87/50) \cdot \sin(493/250))/8 + 3/8,$
 $(51 \cdot \cos(3961/2000) \cdot \exp(-699/400))/40 - (9 \cdot \exp(-699/400) \cdot \sin(3961/2000))/8 + 3/8,$
 $(51 \cdot \cos(1989/1000) \cdot \exp(-351/200))/40 - (9 \cdot \exp(-351/200) \cdot \sin(1989/1000))/8 + 3/8,$
 $(51 \cdot \cos(799/400) \cdot \exp(-141/80))/40 - (9 \cdot \exp(-141/80) \cdot \sin(799/400))/8 + 3/8,$
 $(51 \cdot \cos(1003/500) \cdot \exp(-177/100))/40 - (9 \cdot \exp(-177/100) \cdot \sin(1003/500))/8 + 3/8,$

$(51 \cdot \cos(4029/2000) \cdot \exp(-711/400))/40 - (9 \cdot \exp(-711/400) \cdot \sin(4029/2000))/8 + 3/8,$
 $(51 \cdot \cos(2023/1000) \cdot \exp(-357/200))/40 - (9 \cdot \exp(-357/200) \cdot \sin(2023/1000))/8 + 3/8,$
 $(51 \cdot \cos(4063/2000) \cdot \exp(-717/400))/40 - (9 \cdot \exp(-717/400) \cdot \sin(4063/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/25) \cdot \exp(-9/5))/40 - (9 \cdot \exp(-9/5) \cdot \sin(51/25))/8 + 3/8,$
 $(51 \cdot \cos(4097/2000) \cdot \exp(-723/400))/40 - (9 \cdot \exp(-723/400) \cdot \sin(4097/2000))/8 + 3/8,$
 $(51 \cdot \cos(2057/1000) \cdot \exp(-363/200))/40 - (9 \cdot \exp(-363/200) \cdot \sin(2057/1000))/8 + 3/8,$
 $(51 \cdot \cos(4131/2000) \cdot \exp(-729/400))/40 - (9 \cdot \exp(-729/400) \cdot \sin(4131/2000))/8 + 3/8,$
 $(51 \cdot \cos(1037/500) \cdot \exp(-183/100))/40 - (9 \cdot \exp(-183/100) \cdot \sin(1037/500))/8 + 3/8,$
 $(51 \cdot \cos(833/400) \cdot \exp(-147/80))/40 - (9 \cdot \exp(-147/80) \cdot \sin(833/400))/8 + 3/8,$
 $(51 \cdot \cos(2091/1000) \cdot \exp(-369/200))/40 - (9 \cdot \exp(-369/200) \cdot \sin(2091/1000))/8 + 3/8,$
 $(51 \cdot \cos(4199/2000) \cdot \exp(-741/400))/40 - (9 \cdot \exp(-741/400) \cdot \sin(4199/2000))/8 + 3/8,$
 $(51 \cdot \cos(527/250) \cdot \exp(-93/50))/40 - (9 \cdot \exp(-93/50) \cdot \sin(527/250))/8 + 3/8,$
 $(51 \cdot \cos(4233/2000) \cdot \exp(-747/400))/40 - (9 \cdot \exp(-747/400) \cdot \sin(4233/2000))/8 + 3/8,$
 $(51 \cdot \cos(17/8) \cdot \exp(-15/8))/40 - (9 \cdot \exp(-15/8) \cdot \sin(17/8))/8 + 3/8]$

a =

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

an =

$[-153/80, -(153 \cdot \cos(17/2000) \cdot \exp(-3/400))/80 - (6 \cdot \exp(-3/400) \cdot \sin(17/2000))/25,$
 $-(153 \cdot \cos(17/1000) \cdot \exp(-3/200))/80 - (6 \cdot \exp(-3/200) \cdot \sin(17/1000))/25,$
 $-(153 \cdot \cos(51/2000) \cdot \exp(-9/400))/80 - (6 \cdot \exp(-9/400) \cdot \sin(51/2000))/25,$
 $-(153 \cdot \cos(17/500) \cdot \exp(-3/100))/80 - (6 \cdot \exp(-3/100) \cdot \sin(17/500))/25,$
 $-(153 \cdot \cos(17/400) \cdot \exp(-3/80))/80 - (6 \cdot \exp(-3/80) \cdot \sin(17/400))/25,$
 $-(153 \cdot \cos(51/1000) \cdot \exp(-9/200))/80 - (6 \cdot \exp(-9/200) \cdot \sin(51/1000))/25,$
 $-(153 \cdot \cos(119/2000) \cdot \exp(-21/400))/80 - (6 \cdot \exp(-21/400) \cdot \sin(119/2000))/25,$
 $-(153 \cdot \cos(17/250) \cdot \exp(-3/50))/80 - (6 \cdot \exp(-3/50) \cdot \sin(17/250))/25,$
 $-(153 \cdot \cos(153/2000) \cdot \exp(-27/400))/80 - (6 \cdot \exp(-27/400) \cdot \sin(153/2000))/25,$
 $-(153 \cdot \cos(17/200) \cdot \exp(-3/40))/80 - (6 \cdot \exp(-3/40) \cdot \sin(17/200))/25,$
 $-(153 \cdot \cos(187/2000) \cdot \exp(-33/400))/80 - (6 \cdot \exp(-33/400) \cdot \sin(187/2000))/25,$
 $-(153 \cdot \cos(51/500) \cdot \exp(-9/100))/80 - (6 \cdot \exp(-9/100) \cdot \sin(51/500))/25,$
 $-(153 \cdot \cos(221/2000) \cdot \exp(-39/400))/80 - (6 \cdot \exp(-39/400) \cdot \sin(221/2000))/25,$

$(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, -$

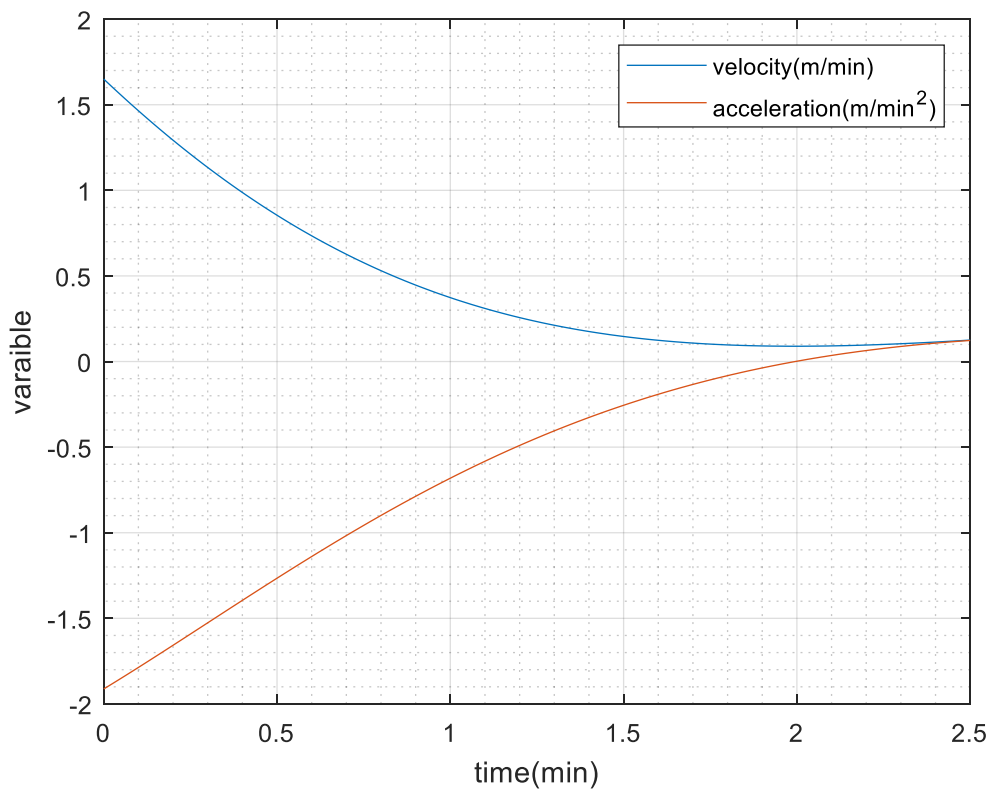
$(153 \cos(1003/1000) \exp(-177/200))/80 - (6 \exp(-177/200) \sin(1003/1000))/25,$ - $(153 \cos(2023/2000) \exp(-357/400))/80 - (6 \exp(-357/400) \sin(2023/2000))/25,$ -
 $(153 \cos(51/50) \exp(-9/10))/80 - (6 \exp(-9/10) \sin(51/50))/25,$ - $(153 \cos(2057/2000) \exp(-363/400))/80 - (6 \exp(-363/400) \sin(2057/2000))/25,$ -
 $(153 \cos(1037/1000) \exp(-183/200))/80 - (6 \exp(-183/200) \sin(1037/1000))/25,$ - $(153 \cos(2091/2000) \exp(-369/400))/80 - (6 \exp(-369/400) \sin(2091/2000))/25,$ -
 $(153 \cos(527/500) \exp(-93/100))/80 - (6 \exp(-93/100) \sin(527/500))/25,$ - $(153 \cos(17/16) \exp(-15/16))/80 - (6 \exp(-15/16) \sin(17/16))/25,$ -
 $(153 \cos(1071/1000) \exp(-189/200))/80 - (6 \exp(-189/200) \sin(1071/1000))/25,$ - $(153 \cos(2159/2000) \exp(-381/400))/80 - (6 \exp(-381/400) \sin(2159/2000))/25,$ -
 $(153 \cos(136/125) \exp(-24/25))/80 - (6 \exp(-24/25) \sin(136/125))/25,$ - $(153 \cos(2193/2000) \exp(-387/400))/80 - (6 \exp(-387/400) \sin(2193/2000))/25,$ -
 $(153 \cos(221/200) \exp(-39/40))/80 - (6 \exp(-39/40) \sin(221/200))/25,$ - $(153 \cos(2227/2000) \exp(-393/400))/80 - (6 \exp(-393/400) \sin(2227/2000))/25,$ -
 $(153 \cos(561/500) \exp(-99/100))/80 - (6 \exp(-99/100) \sin(561/500))/25,$ - $(153 \cos(2261/2000) \exp(-399/400))/80 - (6 \exp(-399/400) \sin(2261/2000))/25,$ -
 $(153 \cos(1139/1000) \exp(-201/200))/80 - (6 \exp(-201/200) \sin(1139/1000))/25,$ - $(153 \cos(459/400) \exp(-81/80))/80 - (6 \exp(-81/80) \sin(459/400))/25,$ -
 $(153 \cos(289/250) \exp(-51/50))/80 - (6 \exp(-51/50) \sin(289/250))/25,$ - $(153 \cos(2329/2000) \exp(-411/400))/80 - (6 \exp(-411/400) \sin(2329/2000))/25,$ -
 $(153 \cos(1173/1000) \exp(-207/200))/80 - (6 \exp(-207/200) \sin(1173/1000))/25,$ - $(153 \cos(2363/2000) \exp(-417/400))/80 - (6 \exp(-417/400) \sin(2363/2000))/25,$ -
 $(153 \cos(119/100) \exp(-21/20))/80 - (6 \exp(-21/20) \sin(119/100))/25,$ - $(153 \cos(2397/2000) \exp(-423/400))/80 - (6 \exp(-423/400) \sin(2397/2000))/25,$ -
 $(153 \cos(1207/1000) \exp(-213/200))/80 - (6 \exp(-213/200) \sin(1207/1000))/25,$ - $(153 \cos(2431/2000) \exp(-429/400))/80 - (6 \exp(-429/400) \sin(2431/2000))/25,$ -
 $(153 \cos(153/125) \exp(-27/25))/80 - (6 \exp(-27/25) \sin(153/125))/25,$ - $(153 \cos(493/400) \exp(-87/80))/80 - (6 \exp(-87/80) \sin(493/400))/25,$ -
 $(153 \cos(1241/1000) \exp(-219/200))/80 - (6 \exp(-219/200) \sin(1241/1000))/25,$ - $(153 \cos(2499/2000) \exp(-441/400))/80 - (6 \exp(-441/400) \sin(2499/2000))/25,$ -
 $(153 \cos(629/500) \exp(-111/100))/80 - (6 \exp(-111/100) \sin(629/500))/25,$ - $(153 \cos(2533/2000) \exp(-447/400))/80 - (6 \exp(-447/400) \sin(2533/2000))/25,$ -
 $(153 \cos(51/40) \exp(-9/8))/80 - (6 \exp(-9/8) \sin(51/40))/25,$ - $(153 \cos(2567/2000) \exp(-$

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(-

$69/50) * \sin(391/250)) / 25, - (153 * \cos(629/400) * \exp(-111/80)) / 80 -$
 $(6 * \exp(-111/80) * \sin(629/400)) / 25, - (153 * \cos(1581/1000) * \exp(-$
 $279/200)) / 80 - (6 * \exp(-279/200) * \sin(1581/1000)) / 25, -$
 $(153 * \cos(3179/2000) * \exp(-561/400)) / 80 - (6 * \exp(-$
 $561/400) * \sin(3179/2000)) / 25, - (153 * \cos(799/500) * \exp(-$
 $141/100)) / 80 - (6 * \exp(-141/100) * \sin(799/500)) / 25, -$
 $(153 * \cos(3213/2000) * \exp(-567/400)) / 80 - (6 * \exp(-$
 $567/400) * \sin(3213/2000)) / 25, - (153 * \cos(323/200) * \exp(-57/40)) / 80$
 $- (6 * \exp(-57/40) * \sin(323/200)) / 25, - (153 * \cos(3247/2000) * \exp(-$
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 $- (6 * \exp(-579/400) * \sin(3281/2000)) / 25, -$
 $(153 * \cos(1649/1000) * \exp(-291/200)) / 80 - (6 * \exp(-$
 $291/200) * \sin(1649/1000)) / 25, - (153 * \cos(663/400) * \exp(-$
 $117/80)) / 80 - (6 * \exp(-117/80) * \sin(663/400)) / 25, -$
 $(153 * \cos(833/500) * \exp(-147/100)) / 80 - (6 * \exp(-$
 $147/100) * \sin(833/500)) / 25, - (153 * \cos(3349/2000) * \exp(-$
 $591/400)) / 80 - (6 * \exp(-591/400) * \sin(3349/2000)) / 25, -$
 $(153 * \cos(1683/1000) * \exp(-297/200)) / 80 - (6 * \exp(-$
 $297/200) * \sin(1683/1000)) / 25, - (153 * \cos(3383/2000) * \exp(-$
 $597/400)) / 80 - (6 * \exp(-597/400) * \sin(3383/2000)) / 25, -$
 $(153 * \cos(17/10) * \exp(-3/2)) / 80 - (6 * \exp(-3/2) * \sin(17/10)) / 25, -$
 $(153 * \cos(3417/2000) * \exp(-603/400)) / 80 - (6 * \exp(-$
 $603/400) * \sin(3417/2000)) / 25, - (153 * \cos(1717/1000) * \exp(-$
 $303/200)) / 80 - (6 * \exp(-303/200) * \sin(1717/1000)) / 25, -$
 $(153 * \cos(3451/2000) * \exp(-609/400)) / 80 - (6 * \exp(-$
 $609/400) * \sin(3451/2000)) / 25, - (153 * \cos(867/500) * \exp(-$
 $153/100)) / 80 - (6 * \exp(-153/100) * \sin(867/500)) / 25, -$
 $(153 * \cos(697/400) * \exp(-123/80)) / 80 - (6 * \exp(-$
 $123/80) * \sin(697/400)) / 25, - (153 * \cos(1751/1000) * \exp(-$
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 $(153 * \cos(3519/2000) * \exp(-621/400)) / 80 - (6 * \exp(-$
 $621/400) * \sin(3519/2000)) / 25, - (153 * \cos(221/125) * \exp(-39/25)) / 80$
 $- (6 * \exp(-39/25) * \sin(221/125)) / 25, - (153 * \cos(3553/2000) * \exp(-$
 $627/400)) / 80 - (6 * \exp(-627/400) * \sin(3553/2000)) / 25, -$
 $(153 * \cos(357/200) * \exp(-63/40)) / 80 - (6 * \exp(-$
 $63/40) * \sin(357/200)) / 25, - (153 * \cos(3587/2000) * \exp(-633/400)) / 80$
 $- (6 * \exp(-633/400) * \sin(3587/2000)) / 25, - (153 * \cos(901/500) * \exp(-$
 $159/100)) / 80 - (6 * \exp(-159/100) * \sin(901/500)) / 25, -$
 $(153 * \cos(3621/2000) * \exp(-639/400)) / 80 - (6 * \exp(-$
 $639/400) * \sin(3621/2000)) / 25, - (153 * \cos(1819/1000) * \exp(-$
 $321/200)) / 80 - (6 * \exp(-321/200) * \sin(1819/1000)) / 25, -$
 $(153 * \cos(731/400) * \exp(-129/80)) / 80 - (6 * \exp(-$
 $129/80) * \sin(731/400)) / 25, - (153 * \cos(459/250) * \exp(-81/50)) / 80 -$
 $(6 * \exp(-81/50) * \sin(459/250)) / 25, - (153 * \cos(3689/2000) * \exp(-$
 $651/400)) / 80 - (6 * \exp(-651/400) * \sin(3689/2000)) / 25, -$

$(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(-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, - (153 \cos(171/100) \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$

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3.

INPUT

```

commandwindow
clear
clc
syms x
y= 5*(sin(5*x))^5
v = int(3.142*y^2,0,3.142)
e = double(v)

```

OUTPUT

y =

5*sin(5*x)^5

v =

$$(4713 \cdot \sin(1571/25))/5120 - (1571 \cdot \sin(1571/10))/512000 - (32991 \cdot \sin(1571/50))/10240 + (1571 \cdot \sin(3142/25))/40960 - (4713 \cdot \sin(4713/50))/20480 + 155486583/2560000$$

e =

60.7291