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MATRIC NO: 16/ENG03/037

DEPARTMENT: CIVIL ENGINEERING

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 =

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

vn =

$$\begin{aligned} & [33/20, (51*\cos(17/2000)*\exp(-3/400))/40 - \\ & (9*\exp(-3/400)*\sin(17/2000))/8 + 3/8, \\ & (51*\cos(17/1000)*\exp(-3/200))/40 - (9*\exp(-3/200)*\sin(17/1000))/8 \\ & + 3/8, (51*\cos(51/2000)*\exp(-9/400))/40 - \\ & (9*\exp(-9/400)*\sin(51/2000))/8 + 3/8, \\ & (51*\cos(17/500)*\exp(-3/100))/40 - (9*\exp(-3/100)*\sin(17/500))/8 + \\ & 3/8, (51*\cos(17/400)*\exp(-3/80))/40 - \\ & (9*\exp(-3/80)*\sin(17/400))/8 + 3/8, \\ & (51*\cos(51/1000)*\exp(-9/200))/40 - (9*\exp(-9/200)*\sin(51/1000))/8 \\ & + 3/8, (51*\cos(119/2000)*\exp(-21/400))/40 - \\ & (9*\exp(-21/400)*\sin(119/2000))/8 + 3/8, \\ & (51*\cos(17/250)*\exp(-3/50))/40 - (9*\exp(-3/50)*\sin(17/250))/8 + \\ & 3/8, (51*\cos(153/2000)*\exp(-27/400))/40 - \\ & (9*\exp(-27/400)*\sin(153/2000))/8 + 3/8, \\ & (51*\cos(17/200)*\exp(-3/40))/40 - (9*\exp(-3/40)*\sin(17/200))/8 + \\ & 3/8, (51*\cos(187/2000)*\exp(-33/400))/40 - \\ & (9*\exp(-33/400)*\sin(187/2000))/8 + 3/8, \end{aligned}$$

$(51 \cdot \cos(51/500) \cdot \exp(-9/100))/40 - (9 \cdot \exp(-9/100) \cdot \sin(51/500))/8 +$
 $3/8, (51 \cdot \cos(221/2000) \cdot \exp(-39/400))/40 -$
 $(9 \cdot \exp(-39/400) \cdot \sin(221/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/1000) \cdot \exp(-21/200))/40 -$
 $(9 \cdot \exp(-21/200) \cdot \sin(119/1000))/8 + 3/8,$
 $(51 \cdot \cos(51/400) \cdot \exp(-9/80))/40 - (9 \cdot \exp(-9/80) \cdot \sin(51/400))/8 +$
 $3/8, (51 \cdot \cos(17/125) \cdot \exp(-3/25))/40 -$
 $(9 \cdot \exp(-3/25) \cdot \sin(17/125))/8 + 3/8,$
 $(51 \cdot \cos(289/2000) \cdot \exp(-51/400))/40 -$
 $(9 \cdot \exp(-51/400) \cdot \sin(289/2000))/8 + 3/8,$
 $(51 \cdot \cos(153/1000) \cdot \exp(-27/200))/40 -$
 $(9 \cdot \exp(-27/200) \cdot \sin(153/1000))/8 + 3/8,$
 $(51 \cdot \cos(323/2000) \cdot \exp(-57/400))/40 -$
 $(9 \cdot \exp(-57/400) \cdot \sin(323/2000))/8 + 3/8,$
 $(51 \cdot \cos(17/100) \cdot \exp(-3/20))/40 - (9 \cdot \exp(-3/20) \cdot \sin(17/100))/8 +$
 $3/8, (51 \cdot \cos(357/2000) \cdot \exp(-63/400))/40 -$
 $(9 \cdot \exp(-63/400) \cdot \sin(357/2000))/8 + 3/8,$
 $(51 \cdot \cos(187/1000) \cdot \exp(-33/200))/40 -$
 $(9 \cdot \exp(-33/200) \cdot \sin(187/1000))/8 + 3/8,$
 $(51 \cdot \cos(391/2000) \cdot \exp(-69/400))/40 -$
 $(9 \cdot \exp(-69/400) \cdot \sin(391/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/250) \cdot \exp(-9/50))/40 - (9 \cdot \exp(-9/50) \cdot \sin(51/250))/8 +$
 $3/8, (51 \cdot \cos(17/80) \cdot \exp(-3/16))/40 - (9 \cdot \exp(-3/16) \cdot \sin(17/80))/8$
 $+ 3/8, (51 \cdot \cos(221/1000) \cdot \exp(-39/200))/40 -$
 $(9 \cdot \exp(-39/200) \cdot \sin(221/1000))/8 + 3/8,$
 $(51 \cdot \cos(459/2000) \cdot \exp(-81/400))/40 -$
 $(9 \cdot \exp(-81/400) \cdot \sin(459/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/500) \cdot \exp(-21/100))/40 -$
 $(9 \cdot \exp(-21/100) \cdot \sin(119/500))/8 + 3/8,$
 $(51 \cdot \cos(493/2000) \cdot \exp(-87/400))/40 -$
 $(9 \cdot \exp(-87/400) \cdot \sin(493/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/200) \cdot \exp(-9/40))/40 - (9 \cdot \exp(-9/40) \cdot \sin(51/200))/8 +$
 $3/8, (51 \cdot \cos(527/2000) \cdot \exp(-93/400))/40 -$
 $(9 \cdot \exp(-93/400) \cdot \sin(527/2000))/8 + 3/8,$
 $(51 \cdot \cos(34/125) \cdot \exp(-6/25))/40 - (9 \cdot \exp(-6/25) \cdot \sin(34/125))/8 +$
 $3/8, (51 \cdot \cos(561/2000) \cdot \exp(-99/400))/40 -$
 $(9 \cdot \exp(-99/400) \cdot \sin(561/2000))/8 + 3/8,$
 $(51 \cdot \cos(289/1000) \cdot \exp(-51/200))/40 -$
 $(9 \cdot \exp(-51/200) \cdot \sin(289/1000))/8 + 3/8,$
 $(51 \cdot \cos(119/400) \cdot \exp(-21/80))/40 - (9 \cdot \exp(-21/80) \cdot \sin(119/400))/8$

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

$(9*\exp(-87/200)*\sin(493/1000))/8 + 3/8,$
 $(51*\cos(1003/2000)*\exp(-177/400))/40 -$
 $(9*\exp(-177/400)*\sin(1003/2000))/8 + 3/8,$
 $(51*\cos(51/100)*\exp(-9/20))/40 - (9*\exp(-9/20)*\sin(51/100))/8 +$
 $3/8, (51*\cos(1037/2000)*\exp(-183/400))/40 -$
 $(9*\exp(-183/400)*\sin(1037/2000))/8 + 3/8,$
 $(51*\cos(527/1000)*\exp(-93/200))/40 -$
 $(9*\exp(-93/200)*\sin(527/1000))/8 + 3/8,$
 $(51*\cos(1071/2000)*\exp(-189/400))/40 -$
 $(9*\exp(-189/400)*\sin(1071/2000))/8 + 3/8,$
 $(51*\cos(68/125)*\exp(-12/25))/40 - (9*\exp(-12/25)*\sin(68/125))/8 +$
 $3/8, (51*\cos(221/400)*\exp(-39/80))/40 -$
 $(9*\exp(-39/80)*\sin(221/400))/8 + 3/8,$
 $(51*\cos(561/1000)*\exp(-99/200))/40 -$
 $(9*\exp(-99/200)*\sin(561/1000))/8 + 3/8,$
 $(51*\cos(1139/2000)*\exp(-201/400))/40 -$
 $(9*\exp(-201/400)*\sin(1139/2000))/8 + 3/8,$
 $(51*\cos(289/500)*\exp(-51/100))/40 -$
 $(9*\exp(-51/100)*\sin(289/500))/8 + 3/8,$
 $(51*\cos(1173/2000)*\exp(-207/400))/40 -$
 $(9*\exp(-207/400)*\sin(1173/2000))/8 + 3/8,$
 $(51*\cos(119/200)*\exp(-21/40))/40 - (9*\exp(-21/40)*\sin(119/200))/8$
 $+ 3/8, (51*\cos(1207/2000)*\exp(-213/400))/40 -$
 $(9*\exp(-213/400)*\sin(1207/2000))/8 + 3/8,$
 $(51*\cos(153/250)*\exp(-27/50))/40 - (9*\exp(-27/50)*\sin(153/250))/8$
 $+ 3/8, (51*\cos(1241/2000)*\exp(-219/400))/40 -$
 $(9*\exp(-219/400)*\sin(1241/2000))/8 + 3/8,$
 $(51*\cos(629/1000)*\exp(-111/200))/40 -$
 $(9*\exp(-111/200)*\sin(629/1000))/8 + 3/8,$
 $(51*\cos(51/80)*\exp(-9/16))/40 - (9*\exp(-9/16)*\sin(51/80))/8 +$
 $3/8, (51*\cos(323/500)*\exp(-57/100))/40 -$
 $(9*\exp(-57/100)*\sin(323/500))/8 + 3/8,$
 $(51*\cos(1309/2000)*\exp(-231/400))/40 -$
 $(9*\exp(-231/400)*\sin(1309/2000))/8 + 3/8,$
 $(51*\cos(663/1000)*\exp(-117/200))/40 -$
 $(9*\exp(-117/200)*\sin(663/1000))/8 + 3/8,$
 $(51*\cos(1343/2000)*\exp(-237/400))/40 -$
 $(9*\exp(-237/400)*\sin(1343/2000))/8 + 3/8,$
 $(51*\cos(17/25)*\exp(-3/5))/40 - (9*\exp(-3/5)*\sin(17/25))/8 + 3/8,$
 $(51*\cos(1377/2000)*\exp(-243/400))/40 -$

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

$(51 \cdot \cos(221/250) \cdot \exp(-39/50))/40 - (9 \cdot \exp(-39/50) \cdot \sin(221/250))/8$
 $+ 3/8, (51 \cdot \cos(357/400) \cdot \exp(-63/80))/40 -$
 $(9 \cdot \exp(-63/80) \cdot \sin(357/400))/8 + 3/8,$
 $(51 \cdot \cos(901/1000) \cdot \exp(-159/200))/40 -$
 $(9 \cdot \exp(-159/200) \cdot \sin(901/1000))/8 + 3/8,$
 $(51 \cdot \cos(1819/2000) \cdot \exp(-321/400))/40 -$
 $(9 \cdot \exp(-321/400) \cdot \sin(1819/2000))/8 + 3/8,$
 $(51 \cdot \cos(459/500) \cdot \exp(-81/100))/40 -$
 $(9 \cdot \exp(-81/100) \cdot \sin(459/500))/8 + 3/8,$
 $(51 \cdot \cos(1853/2000) \cdot \exp(-327/400))/40 -$
 $(9 \cdot \exp(-327/400) \cdot \sin(1853/2000))/8 + 3/8,$
 $(51 \cdot \cos(187/200) \cdot \exp(-33/40))/40 - (9 \cdot \exp(-33/40) \cdot \sin(187/200))/8$
 $+ 3/8, (51 \cdot \cos(1887/2000) \cdot \exp(-333/400))/40 -$
 $(9 \cdot \exp(-333/400) \cdot \sin(1887/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/125) \cdot \exp(-21/25))/40 - (9 \cdot \exp(-21/25) \cdot \sin(119/125))/8$
 $+ 3/8, (51 \cdot \cos(1921/2000) \cdot \exp(-339/400))/40 -$
 $(9 \cdot \exp(-339/400) \cdot \sin(1921/2000))/8 + 3/8,$
 $(51 \cdot \cos(969/1000) \cdot \exp(-171/200))/40 -$
 $(9 \cdot \exp(-171/200) \cdot \sin(969/1000))/8 + 3/8,$
 $(51 \cdot \cos(391/400) \cdot \exp(-69/80))/40 - (9 \cdot \exp(-69/80) \cdot \sin(391/400))/8$
 $+ 3/8, (51 \cdot \cos(493/500) \cdot \exp(-87/100))/40 -$
 $(9 \cdot \exp(-87/100) \cdot \sin(493/500))/8 + 3/8,$
 $(51 \cdot \cos(1989/2000) \cdot \exp(-351/400))/40 -$
 $(9 \cdot \exp(-351/400) \cdot \sin(1989/2000))/8 + 3/8,$
 $(51 \cdot \cos(1003/1000) \cdot \exp(-177/200))/40 -$
 $(9 \cdot \exp(-177/200) \cdot \sin(1003/1000))/8 + 3/8,$
 $(51 \cdot \cos(2023/2000) \cdot \exp(-357/400))/40 -$
 $(9 \cdot \exp(-357/400) \cdot \sin(2023/2000))/8 + 3/8,$
 $(51 \cdot \cos(51/50) \cdot \exp(-9/10))/40 - (9 \cdot \exp(-9/10) \cdot \sin(51/50))/8 +$
 $3/8, (51 \cdot \cos(2057/2000) \cdot \exp(-363/400))/40 -$
 $(9 \cdot \exp(-363/400) \cdot \sin(2057/2000))/8 + 3/8,$
 $(51 \cdot \cos(1037/1000) \cdot \exp(-183/200))/40 -$
 $(9 \cdot \exp(-183/200) \cdot \sin(1037/1000))/8 + 3/8,$
 $(51 \cdot \cos(2091/2000) \cdot \exp(-369/400))/40 -$
 $(9 \cdot \exp(-369/400) \cdot \sin(2091/2000))/8 + 3/8,$
 $(51 \cdot \cos(527/500) \cdot \exp(-93/100))/40 -$
 $(9 \cdot \exp(-93/100) \cdot \sin(527/500))/8 + 3/8,$
 $(51 \cdot \cos(17/16) \cdot \exp(-15/16))/40 - (9 \cdot \exp(-15/16) \cdot \sin(17/16))/8 +$
 $3/8, (51 \cdot \cos(1071/1000) \cdot \exp(-189/200))/40 -$
 $(9 \cdot \exp(-189/200) \cdot \sin(1071/1000))/8 + 3/8,$

$(51 \cdot \cos(2159/2000) \cdot \exp(-381/400))/40 -$
 $(9 \cdot \exp(-381/400) \cdot \sin(2159/2000))/8 + 3/8,$
 $(51 \cdot \cos(136/125) \cdot \exp(-24/25))/40 - (9 \cdot \exp(-24/25) \cdot \sin(136/125))/8$
 $+ 3/8, (51 \cdot \cos(2193/2000) \cdot \exp(-387/400))/40 -$
 $(9 \cdot \exp(-387/400) \cdot \sin(2193/2000))/8 + 3/8,$
 $(51 \cdot \cos(221/200) \cdot \exp(-39/40))/40 - (9 \cdot \exp(-39/40) \cdot \sin(221/200))/8$
 $+ 3/8, (51 \cdot \cos(2227/2000) \cdot \exp(-393/400))/40 -$
 $(9 \cdot \exp(-393/400) \cdot \sin(2227/2000))/8 + 3/8,$
 $(51 \cdot \cos(561/500) \cdot \exp(-99/100))/40 -$
 $(9 \cdot \exp(-99/100) \cdot \sin(561/500))/8 + 3/8,$
 $(51 \cdot \cos(2261/2000) \cdot \exp(-399/400))/40 -$
 $(9 \cdot \exp(-399/400) \cdot \sin(2261/2000))/8 + 3/8,$
 $(51 \cdot \cos(1139/1000) \cdot \exp(-201/200))/40 -$
 $(9 \cdot \exp(-201/200) \cdot \sin(1139/1000))/8 + 3/8,$
 $(51 \cdot \cos(459/400) \cdot \exp(-81/80))/40 - (9 \cdot \exp(-81/80) \cdot \sin(459/400))/8$
 $+ 3/8, (51 \cdot \cos(289/250) \cdot \exp(-51/50))/40 -$
 $(9 \cdot \exp(-51/50) \cdot \sin(289/250))/8 + 3/8,$
 $(51 \cdot \cos(2329/2000) \cdot \exp(-411/400))/40 -$
 $(9 \cdot \exp(-411/400) \cdot \sin(2329/2000))/8 + 3/8,$
 $(51 \cdot \cos(1173/1000) \cdot \exp(-207/200))/40 -$
 $(9 \cdot \exp(-207/200) \cdot \sin(1173/1000))/8 + 3/8,$
 $(51 \cdot \cos(2363/2000) \cdot \exp(-417/400))/40 -$
 $(9 \cdot \exp(-417/400) \cdot \sin(2363/2000))/8 + 3/8,$
 $(51 \cdot \cos(119/100) \cdot \exp(-21/20))/40 - (9 \cdot \exp(-21/20) \cdot \sin(119/100))/8$
 $+ 3/8, (51 \cdot \cos(2397/2000) \cdot \exp(-423/400))/40 -$
 $(9 \cdot \exp(-423/400) \cdot \sin(2397/2000))/8 + 3/8,$
 $(51 \cdot \cos(1207/1000) \cdot \exp(-213/200))/40 -$
 $(9 \cdot \exp(-213/200) \cdot \sin(1207/1000))/8 + 3/8,$
 $(51 \cdot \cos(2431/2000) \cdot \exp(-429/400))/40 -$
 $(9 \cdot \exp(-429/400) \cdot \sin(2431/2000))/8 + 3/8,$
 $(51 \cdot \cos(153/125) \cdot \exp(-27/25))/40 - (9 \cdot \exp(-27/25) \cdot \sin(153/125))/8$
 $+ 3/8, (51 \cdot \cos(493/400) \cdot \exp(-87/80))/40 -$
 $(9 \cdot \exp(-87/80) \cdot \sin(493/400))/8 + 3/8,$
 $(51 \cdot \cos(1241/1000) \cdot \exp(-219/200))/40 -$
 $(9 \cdot \exp(-219/200) \cdot \sin(1241/1000))/8 + 3/8,$
 $(51 \cdot \cos(2499/2000) \cdot \exp(-441/400))/40 -$
 $(9 \cdot \exp(-441/400) \cdot \sin(2499/2000))/8 + 3/8,$
 $(51 \cdot \cos(629/500) \cdot \exp(-111/100))/40 -$
 $(9 \cdot \exp(-111/100) \cdot \sin(629/500))/8 + 3/8,$
 $(51 \cdot \cos(2533/2000) \cdot \exp(-447/400))/40 -$

$(9 \cdot \exp(-447/400) \cdot \sin(2533/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(51/40) \cdot \exp(-9/8)) / 40 - (9 \cdot \exp(-9/8) \cdot \sin(51/40)) / 8 + 3/8,$
 $(51 \cdot \cos(2567/2000) \cdot \exp(-453/400)) / 40 -$
 $(9 \cdot \exp(-453/400) \cdot \sin(2567/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(323/250) \cdot \exp(-57/50)) / 40 - (9 \cdot \exp(-57/50) \cdot \sin(323/250)) / 8$
 $+ 3/8, (51 \cdot \cos(2601/2000) \cdot \exp(-459/400)) / 40 -$
 $(9 \cdot \exp(-459/400) \cdot \sin(2601/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1309/1000) \cdot \exp(-231/200)) / 40 -$
 $(9 \cdot \exp(-231/200) \cdot \sin(1309/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(527/400) \cdot \exp(-93/80)) / 40 - (9 \cdot \exp(-93/80) \cdot \sin(527/400)) / 8$
 $+ 3/8, (51 \cdot \cos(663/500) \cdot \exp(-117/100)) / 40 -$
 $(9 \cdot \exp(-117/100) \cdot \sin(663/500)) / 8 + 3/8,$
 $(51 \cdot \cos(2669/2000) \cdot \exp(-471/400)) / 40 -$
 $(9 \cdot \exp(-471/400) \cdot \sin(2669/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1343/1000) \cdot \exp(-237/200)) / 40 -$
 $(9 \cdot \exp(-237/200) \cdot \sin(1343/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(2703/2000) \cdot \exp(-477/400)) / 40 -$
 $(9 \cdot \exp(-477/400) \cdot \sin(2703/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(34/25) \cdot \exp(-6/5)) / 40 - (9 \cdot \exp(-6/5) \cdot \sin(34/25)) / 8 + 3/8,$
 $(51 \cdot \cos(2737/2000) \cdot \exp(-483/400)) / 40 -$
 $(9 \cdot \exp(-483/400) \cdot \sin(2737/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1377/1000) \cdot \exp(-243/200)) / 40 -$
 $(9 \cdot \exp(-243/200) \cdot \sin(1377/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(2771/2000) \cdot \exp(-489/400)) / 40 -$
 $(9 \cdot \exp(-489/400) \cdot \sin(2771/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(697/500) \cdot \exp(-123/100)) / 40 -$
 $(9 \cdot \exp(-123/100) \cdot \sin(697/500)) / 8 + 3/8,$
 $(51 \cdot \cos(561/400) \cdot \exp(-99/80)) / 40 - (9 \cdot \exp(-99/80) \cdot \sin(561/400)) / 8$
 $+ 3/8, (51 \cdot \cos(1411/1000) \cdot \exp(-249/200)) / 40 -$
 $(9 \cdot \exp(-249/200) \cdot \sin(1411/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(2839/2000) \cdot \exp(-501/400)) / 40 -$
 $(9 \cdot \exp(-501/400) \cdot \sin(2839/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(357/250) \cdot \exp(-63/50)) / 40 - (9 \cdot \exp(-63/50) \cdot \sin(357/250)) / 8$
 $+ 3/8, (51 \cdot \cos(2873/2000) \cdot \exp(-507/400)) / 40 -$
 $(9 \cdot \exp(-507/400) \cdot \sin(2873/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(289/200) \cdot \exp(-51/40)) / 40 - (9 \cdot \exp(-51/40) \cdot \sin(289/200)) / 8$
 $+ 3/8, (51 \cdot \cos(2907/2000) \cdot \exp(-513/400)) / 40 -$
 $(9 \cdot \exp(-513/400) \cdot \sin(2907/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(731/500) \cdot \exp(-129/100)) / 40 -$
 $(9 \cdot \exp(-129/100) \cdot \sin(731/500)) / 8 + 3/8,$

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

$(9 \cdot \exp(-117/80) \cdot \sin(663/400)) / 8 + 3/8,$
 $(51 \cdot \cos(833/500) \cdot \exp(-147/100)) / 40 -$
 $(9 \cdot \exp(-147/100) \cdot \sin(833/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3349/2000) \cdot \exp(-591/400)) / 40 -$
 $(9 \cdot \exp(-591/400) \cdot \sin(3349/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1683/1000) \cdot \exp(-297/200)) / 40 -$
 $(9 \cdot \exp(-297/200) \cdot \sin(1683/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3383/2000) \cdot \exp(-597/400)) / 40 -$
 $(9 \cdot \exp(-597/400) \cdot \sin(3383/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(17/10) \cdot \exp(-3/2)) / 40 - (9 \cdot \exp(-3/2) \cdot \sin(17/10)) / 8 + 3/8,$
 $(51 \cdot \cos(3417/2000) \cdot \exp(-603/400)) / 40 -$
 $(9 \cdot \exp(-603/400) \cdot \sin(3417/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1717/1000) \cdot \exp(-303/200)) / 40 -$
 $(9 \cdot \exp(-303/200) \cdot \sin(1717/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3451/2000) \cdot \exp(-609/400)) / 40 -$
 $(9 \cdot \exp(-609/400) \cdot \sin(3451/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(867/500) \cdot \exp(-153/100)) / 40 -$
 $(9 \cdot \exp(-153/100) \cdot \sin(867/500)) / 8 + 3/8,$
 $(51 \cdot \cos(697/400) \cdot \exp(-123/80)) / 40 -$
 $(9 \cdot \exp(-123/80) \cdot \sin(697/400)) / 8 + 3/8,$
 $(51 \cdot \cos(1751/1000) \cdot \exp(-309/200)) / 40 -$
 $(9 \cdot \exp(-309/200) \cdot \sin(1751/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3519/2000) \cdot \exp(-621/400)) / 40 -$
 $(9 \cdot \exp(-621/400) \cdot \sin(3519/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(221/125) \cdot \exp(-39/25)) / 40 - (9 \cdot \exp(-39/25) \cdot \sin(221/125)) / 8$
 $+ 3/8, (51 \cdot \cos(3553/2000) \cdot \exp(-627/400)) / 40 -$
 $(9 \cdot \exp(-627/400) \cdot \sin(3553/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(357/200) \cdot \exp(-63/40)) / 40 - (9 \cdot \exp(-63/40) \cdot \sin(357/200)) / 8$
 $+ 3/8, (51 \cdot \cos(3587/2000) \cdot \exp(-633/400)) / 40 -$
 $(9 \cdot \exp(-633/400) \cdot \sin(3587/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(901/500) \cdot \exp(-159/100)) / 40 -$
 $(9 \cdot \exp(-159/100) \cdot \sin(901/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3621/2000) \cdot \exp(-639/400)) / 40 -$
 $(9 \cdot \exp(-639/400) \cdot \sin(3621/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1819/1000) \cdot \exp(-321/200)) / 40 -$
 $(9 \cdot \exp(-321/200) \cdot \sin(1819/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(731/400) \cdot \exp(-129/80)) / 40 -$
 $(9 \cdot \exp(-129/80) \cdot \sin(731/400)) / 8 + 3/8,$
 $(51 \cdot \cos(459/250) \cdot \exp(-81/50)) / 40 - (9 \cdot \exp(-81/50) \cdot \sin(459/250)) / 8$
 $+ 3/8, (51 \cdot \cos(3689/2000) \cdot \exp(-651/400)) / 40 -$

$(9 \cdot \exp(-651/400) \cdot \sin(3689/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1853/1000) \cdot \exp(-327/200)) / 40 -$
 $(9 \cdot \exp(-327/200) \cdot \sin(1853/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3723/2000) \cdot \exp(-657/400)) / 40 -$
 $(9 \cdot \exp(-657/400) \cdot \sin(3723/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(187/100) \cdot \exp(-33/20)) / 40 - (9 \cdot \exp(-33/20) \cdot \sin(187/100)) / 8$
 $+ 3/8, (51 \cdot \cos(3757/2000) \cdot \exp(-663/400)) / 40 -$
 $(9 \cdot \exp(-663/400) \cdot \sin(3757/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1887/1000) \cdot \exp(-333/200)) / 40 -$
 $(9 \cdot \exp(-333/200) \cdot \sin(1887/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3791/2000) \cdot \exp(-669/400)) / 40 -$
 $(9 \cdot \exp(-669/400) \cdot \sin(3791/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(238/125) \cdot \exp(-42/25)) / 40 - (9 \cdot \exp(-42/25) \cdot \sin(238/125)) / 8$
 $+ 3/8, (51 \cdot \cos(153/80) \cdot \exp(-27/16)) / 40 -$
 $(9 \cdot \exp(-27/16) \cdot \sin(153/80)) / 8 + 3/8,$
 $(51 \cdot \cos(1921/1000) \cdot \exp(-339/200)) / 40 -$
 $(9 \cdot \exp(-339/200) \cdot \sin(1921/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(3859/2000) \cdot \exp(-681/400)) / 40 -$
 $(9 \cdot \exp(-681/400) \cdot \sin(3859/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(969/500) \cdot \exp(-171/100)) / 40 -$
 $(9 \cdot \exp(-171/100) \cdot \sin(969/500)) / 8 + 3/8,$
 $(51 \cdot \cos(3893/2000) \cdot \exp(-687/400)) / 40 -$
 $(9 \cdot \exp(-687/400) \cdot \sin(3893/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(391/200) \cdot \exp(-69/40)) / 40 - (9 \cdot \exp(-69/40) \cdot \sin(391/200)) / 8$
 $+ 3/8, (51 \cdot \cos(3927/2000) \cdot \exp(-693/400)) / 40 -$
 $(9 \cdot \exp(-693/400) \cdot \sin(3927/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(493/250) \cdot \exp(-87/50)) / 40 - (9 \cdot \exp(-87/50) \cdot \sin(493/250)) / 8$
 $+ 3/8, (51 \cdot \cos(3961/2000) \cdot \exp(-699/400)) / 40 -$
 $(9 \cdot \exp(-699/400) \cdot \sin(3961/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(1989/1000) \cdot \exp(-351/200)) / 40 -$
 $(9 \cdot \exp(-351/200) \cdot \sin(1989/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(799/400) \cdot \exp(-141/80)) / 40 -$
 $(9 \cdot \exp(-141/80) \cdot \sin(799/400)) / 8 + 3/8,$
 $(51 \cdot \cos(1003/500) \cdot \exp(-177/100)) / 40 -$
 $(9 \cdot \exp(-177/100) \cdot \sin(1003/500)) / 8 + 3/8,$
 $(51 \cdot \cos(4029/2000) \cdot \exp(-711/400)) / 40 -$
 $(9 \cdot \exp(-711/400) \cdot \sin(4029/2000)) / 8 + 3/8,$
 $(51 \cdot \cos(2023/1000) \cdot \exp(-357/200)) / 40 -$
 $(9 \cdot \exp(-357/200) \cdot \sin(2023/1000)) / 8 + 3/8,$
 $(51 \cdot \cos(4063/2000) \cdot \exp(-717/400)) / 40 -$

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

a =

$$\begin{aligned}
& - (153*\cos((17*t)/20)*\exp(-(3*t)/4))/80 - \\
& (6*\sin((17*t)/20)*\exp(-(3*t)/4))/25
\end{aligned}$$

an =

$$\begin{aligned}
& [-153/80, - (153*\cos(17/2000)*\exp(-3/400))/80 - \\
& (6*\exp(-3/400)*\sin(17/2000))/25, - \\
& (153*\cos(17/1000)*\exp(-3/200))/80 - \\
& (6*\exp(-3/200)*\sin(17/1000))/25, - \\
& (153*\cos(51/2000)*\exp(-9/400))/80 - \\
& (6*\exp(-9/400)*\sin(51/2000))/25, - \\
& (153*\cos(17/500)*\exp(-3/100))/80 - \\
& (6*\exp(-3/100)*\sin(17/500))/25, - (153*\cos(17/400)*\exp(-3/80))/80 \\
& - (6*\exp(-3/80)*\sin(17/400))/25, - \\
& (153*\cos(51/1000)*\exp(-9/200))/80 -
\end{aligned}$$

$(6 \cdot \exp(-9/200) \cdot \sin(51/1000)) / 25, -$
 $(153 \cdot \cos(119/2000) \cdot \exp(-21/400)) / 80 -$
 $(6 \cdot \exp(-21/400) \cdot \sin(119/2000)) / 25, -$
 $(153 \cdot \cos(17/250) \cdot \exp(-3/50)) / 80 - (6 \cdot \exp(-3/50) \cdot \sin(17/250)) / 25,$
 $- (153 \cdot \cos(153/2000) \cdot \exp(-27/400)) / 80 -$
 $(6 \cdot \exp(-27/400) \cdot \sin(153/2000)) / 25, -$
 $(153 \cdot \cos(17/200) \cdot \exp(-3/40)) / 80 - (6 \cdot \exp(-3/40) \cdot \sin(17/200)) / 25,$
 $- (153 \cdot \cos(187/2000) \cdot \exp(-33/400)) / 80 -$
 $(6 \cdot \exp(-33/400) \cdot \sin(187/2000)) / 25, -$
 $(153 \cdot \cos(51/500) \cdot \exp(-9/100)) / 80 -$
 $(6 \cdot \exp(-9/100) \cdot \sin(51/500)) / 25, -$
 $(153 \cdot \cos(221/2000) \cdot \exp(-39/400)) / 80 -$
 $(6 \cdot \exp(-39/400) \cdot \sin(221/2000)) / 25, -$
 $(153 \cdot \cos(119/1000) \cdot \exp(-21/200)) / 80 -$
 $(6 \cdot \exp(-21/200) \cdot \sin(119/1000)) / 25, -$
 $(153 \cdot \cos(51/400) \cdot \exp(-9/80)) / 80 - (6 \cdot \exp(-9/80) \cdot \sin(51/400)) / 25,$
 $- (153 \cdot \cos(17/125) \cdot \exp(-3/25)) / 80 -$
 $(6 \cdot \exp(-3/25) \cdot \sin(17/125)) / 25, -$
 $(153 \cdot \cos(289/2000) \cdot \exp(-51/400)) / 80 -$
 $(6 \cdot \exp(-51/400) \cdot \sin(289/2000)) / 25, -$
 $(153 \cdot \cos(153/1000) \cdot \exp(-27/200)) / 80 -$
 $(6 \cdot \exp(-27/200) \cdot \sin(153/1000)) / 25, -$
 $(153 \cdot \cos(323/2000) \cdot \exp(-57/400)) / 80 -$
 $(6 \cdot \exp(-57/400) \cdot \sin(323/2000)) / 25, -$
 $(153 \cdot \cos(17/100) \cdot \exp(-3/20)) / 80 - (6 \cdot \exp(-3/20) \cdot \sin(17/100)) / 25,$
 $- (153 \cdot \cos(357/2000) \cdot \exp(-63/400)) / 80 -$
 $(6 \cdot \exp(-63/400) \cdot \sin(357/2000)) / 25, -$
 $(153 \cdot \cos(187/1000) \cdot \exp(-33/200)) / 80 -$
 $(6 \cdot \exp(-33/200) \cdot \sin(187/1000)) / 25, -$
 $(153 \cdot \cos(391/2000) \cdot \exp(-69/400)) / 80 -$
 $(6 \cdot \exp(-69/400) \cdot \sin(391/2000)) / 25, -$
 $(153 \cdot \cos(51/250) \cdot \exp(-9/50)) / 80 - (6 \cdot \exp(-9/50) \cdot \sin(51/250)) / 25,$
 $- (153 \cdot \cos(17/80) \cdot \exp(-3/16)) / 80 - (6 \cdot \exp(-3/16) \cdot \sin(17/80)) / 25,$
 $- (153 \cdot \cos(221/1000) \cdot \exp(-39/200)) / 80 -$
 $(6 \cdot \exp(-39/200) \cdot \sin(221/1000)) / 25, -$
 $(153 \cdot \cos(459/2000) \cdot \exp(-81/400)) / 80 -$
 $(6 \cdot \exp(-81/400) \cdot \sin(459/2000)) / 25, -$
 $(153 \cdot \cos(119/500) \cdot \exp(-21/100)) / 80 -$
 $(6 \cdot \exp(-21/100) \cdot \sin(119/500)) / 25, -$
 $(153 \cdot \cos(493/2000) \cdot \exp(-87/400)) / 80 -$

$(6 \cdot \exp(-87/400) \cdot \sin(493/2000)) / 25, -$
 $(153 \cdot \cos(51/200) \cdot \exp(-9/40)) / 80 - (6 \cdot \exp(-9/40) \cdot \sin(51/200)) / 25,$
 $- (153 \cdot \cos(527/2000) \cdot \exp(-93/400)) / 80 -$
 $(6 \cdot \exp(-93/400) \cdot \sin(527/2000)) / 25, -$
 $(153 \cdot \cos(34/125) \cdot \exp(-6/25)) / 80 - (6 \cdot \exp(-6/25) \cdot \sin(34/125)) / 25,$
 $- (153 \cdot \cos(561/2000) \cdot \exp(-99/400)) / 80 -$
 $(6 \cdot \exp(-99/400) \cdot \sin(561/2000)) / 25, -$
 $(153 \cdot \cos(289/1000) \cdot \exp(-51/200)) / 80 -$
 $(6 \cdot \exp(-51/200) \cdot \sin(289/1000)) / 25, -$
 $(153 \cdot \cos(119/400) \cdot \exp(-21/80)) / 80 -$
 $(6 \cdot \exp(-21/80) \cdot \sin(119/400)) / 25, -$
 $(153 \cdot \cos(153/500) \cdot \exp(-27/100)) / 80 -$
 $(6 \cdot \exp(-27/100) \cdot \sin(153/500)) / 25, -$
 $(153 \cdot \cos(629/2000) \cdot \exp(-111/400)) / 80 -$
 $(6 \cdot \exp(-111/400) \cdot \sin(629/2000)) / 25, -$
 $(153 \cdot \cos(323/1000) \cdot \exp(-57/200)) / 80 -$
 $(6 \cdot \exp(-57/200) \cdot \sin(323/1000)) / 25, -$
 $(153 \cdot \cos(663/2000) \cdot \exp(-117/400)) / 80 -$
 $(6 \cdot \exp(-117/400) \cdot \sin(663/2000)) / 25, -$
 $(153 \cdot \cos(17/50) \cdot \exp(-3/10)) / 80 - (6 \cdot \exp(-3/10) \cdot \sin(17/50)) / 25, -$
 $(153 \cdot \cos(697/2000) \cdot \exp(-123/400)) / 80 -$
 $(6 \cdot \exp(-123/400) \cdot \sin(697/2000)) / 25, -$
 $(153 \cdot \cos(357/1000) \cdot \exp(-63/200)) / 80 -$
 $(6 \cdot \exp(-63/200) \cdot \sin(357/1000)) / 25, -$
 $(153 \cdot \cos(731/2000) \cdot \exp(-129/400)) / 80 -$
 $(6 \cdot \exp(-129/400) \cdot \sin(731/2000)) / 25, -$
 $(153 \cdot \cos(187/500) \cdot \exp(-33/100)) / 80 -$
 $(6 \cdot \exp(-33/100) \cdot \sin(187/500)) / 25, -$
 $(153 \cdot \cos(153/400) \cdot \exp(-27/80)) / 80 -$
 $(6 \cdot \exp(-27/80) \cdot \sin(153/400)) / 25, -$
 $(153 \cdot \cos(391/1000) \cdot \exp(-69/200)) / 80 -$
 $(6 \cdot \exp(-69/200) \cdot \sin(391/1000)) / 25, -$
 $(153 \cdot \cos(799/2000) \cdot \exp(-141/400)) / 80 -$
 $(6 \cdot \exp(-141/400) \cdot \sin(799/2000)) / 25, -$
 $(153 \cdot \cos(51/125) \cdot \exp(-9/25)) / 80 - (6 \cdot \exp(-9/25) \cdot \sin(51/125)) / 25,$
 $- (153 \cdot \cos(833/2000) \cdot \exp(-147/400)) / 80 -$
 $(6 \cdot \exp(-147/400) \cdot \sin(833/2000)) / 25, -$
 $(153 \cdot \cos(17/40) \cdot \exp(-3/8)) / 80 - (6 \cdot \exp(-3/8) \cdot \sin(17/40)) / 25, -$
 $(153 \cdot \cos(867/2000) \cdot \exp(-153/400)) / 80 -$
 $(6 \cdot \exp(-153/400) \cdot \sin(867/2000)) / 25, -$

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(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, -
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(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, -
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(6*exp(-207/400)*sin(1173/2000))/25, -
(153*cos(119/200)*exp(-21/40))/80 -
(6*exp(-21/40)*sin(119/200))/25, -
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(6*exp(-213/400)*sin(1207/2000))/25, -
(153*cos(153/250)*exp(-27/50))/80 -

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 $(153 \cdot \cos(1241/2000) \cdot \exp(-219/400)) / 80 -$
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 $(153 \cdot \cos(629/1000) \cdot \exp(-111/200)) / 80 -$
 $(6 \cdot \exp(-111/200) \cdot \sin(629/1000)) / 25, -$
 $(153 \cdot \cos(51/80) \cdot \exp(-9/16)) / 80 - (6 \cdot \exp(-9/16) \cdot \sin(51/80)) / 25, -$
 $(153 \cdot \cos(323/500) \cdot \exp(-57/100)) / 80 -$
 $(6 \cdot \exp(-57/100) \cdot \sin(323/500)) / 25, -$
 $(153 \cdot \cos(1309/2000) \cdot \exp(-231/400)) / 80 -$
 $(6 \cdot \exp(-231/400) \cdot \sin(1309/2000)) / 25, -$
 $(153 \cdot \cos(663/1000) \cdot \exp(-117/200)) / 80 -$
 $(6 \cdot \exp(-117/200) \cdot \sin(663/1000)) / 25, -$
 $(153 \cdot \cos(1343/2000) \cdot \exp(-237/400)) / 80 -$
 $(6 \cdot \exp(-237/400) \cdot \sin(1343/2000)) / 25, -$
 $(153 \cdot \cos(17/25) \cdot \exp(-3/5)) / 80 - (6 \cdot \exp(-3/5) \cdot \sin(17/25)) / 25, -$
 $(153 \cdot \cos(1377/2000) \cdot \exp(-243/400)) / 80 -$
 $(6 \cdot \exp(-243/400) \cdot \sin(1377/2000)) / 25, -$
 $(153 \cdot \cos(697/1000) \cdot \exp(-123/200)) / 80 -$
 $(6 \cdot \exp(-123/200) \cdot \sin(697/1000)) / 25, -$
 $(153 \cdot \cos(1411/2000) \cdot \exp(-249/400)) / 80 -$
 $(6 \cdot \exp(-249/400) \cdot \sin(1411/2000)) / 25, -$
 $(153 \cdot \cos(357/500) \cdot \exp(-63/100)) / 80 -$
 $(6 \cdot \exp(-63/100) \cdot \sin(357/500)) / 25, -$
 $(153 \cdot \cos(289/400) \cdot \exp(-51/80)) / 80 -$
 $(6 \cdot \exp(-51/80) \cdot \sin(289/400)) / 25, -$
 $(153 \cdot \cos(731/1000) \cdot \exp(-129/200)) / 80 -$
 $(6 \cdot \exp(-129/200) \cdot \sin(731/1000)) / 25, -$
 $(153 \cdot \cos(1479/2000) \cdot \exp(-261/400)) / 80 -$
 $(6 \cdot \exp(-261/400) \cdot \sin(1479/2000)) / 25, -$
 $(153 \cdot \cos(187/250) \cdot \exp(-33/50)) / 80 -$
 $(6 \cdot \exp(-33/50) \cdot \sin(187/250)) / 25, -$
 $(153 \cdot \cos(1513/2000) \cdot \exp(-267/400)) / 80 -$
 $(6 \cdot \exp(-267/400) \cdot \sin(1513/2000)) / 25, -$
 $(153 \cdot \cos(153/200) \cdot \exp(-27/40)) / 80 -$
 $(6 \cdot \exp(-27/40) \cdot \sin(153/200)) / 25, -$
 $(153 \cdot \cos(1547/2000) \cdot \exp(-273/400)) / 80 -$
 $(6 \cdot \exp(-273/400) \cdot \sin(1547/2000)) / 25, -$
 $(153 \cdot \cos(391/500) \cdot \exp(-69/100)) / 80 -$
 $(6 \cdot \exp(-69/100) \cdot \sin(391/500)) / 25, -$
 $(153 \cdot \cos(1581/2000) \cdot \exp(-279/400)) / 80 -$

$(6 \cdot \exp(-279/400) \cdot \sin(1581/2000)) / 25, -$
 $(153 \cdot \cos(799/1000) \cdot \exp(-141/200)) / 80 -$
 $(6 \cdot \exp(-141/200) \cdot \sin(799/1000)) / 25, -$
 $(153 \cdot \cos(323/400) \cdot \exp(-57/80)) / 80 -$
 $(6 \cdot \exp(-57/80) \cdot \sin(323/400)) / 25, -$
 $(153 \cdot \cos(102/125) \cdot \exp(-18/25)) / 80 -$
 $(6 \cdot \exp(-18/25) \cdot \sin(102/125)) / 25, -$
 $(153 \cdot \cos(1649/2000) \cdot \exp(-291/400)) / 80 -$
 $(6 \cdot \exp(-291/400) \cdot \sin(1649/2000)) / 25, -$
 $(153 \cdot \cos(833/1000) \cdot \exp(-147/200)) / 80 -$
 $(6 \cdot \exp(-147/200) \cdot \sin(833/1000)) / 25, -$
 $(153 \cdot \cos(1683/2000) \cdot \exp(-297/400)) / 80 -$
 $(6 \cdot \exp(-297/400) \cdot \sin(1683/2000)) / 25, -$
 $(153 \cdot \cos(17/20) \cdot \exp(-3/4)) / 80 - (6 \cdot \exp(-3/4) \cdot \sin(17/20)) / 25, -$
 $(153 \cdot \cos(1717/2000) \cdot \exp(-303/400)) / 80 -$
 $(6 \cdot \exp(-303/400) \cdot \sin(1717/2000)) / 25, -$
 $(153 \cdot \cos(867/1000) \cdot \exp(-153/200)) / 80 -$
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 $(153 \cdot \cos(1751/2000) \cdot \exp(-309/400)) / 80 -$
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 $(153 \cdot \cos(221/250) \cdot \exp(-39/50)) / 80 -$
 $(6 \cdot \exp(-39/50) \cdot \sin(221/250)) / 25, -$
 $(153 \cdot \cos(357/400) \cdot \exp(-63/80)) / 80 -$
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 $(153 \cdot \cos(187/200) \cdot \exp(-33/40)) / 80 -$
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(6*exp(-69/80)*sin(391/400))/25, -
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(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, -
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(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, -
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(6*exp(-201/200)*sin(1139/1000))/25, -

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(6*exp(-51/50)*sin(289/250))/25, -
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(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 -
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(6*exp(-459/400)*sin(2601/2000))/25, -
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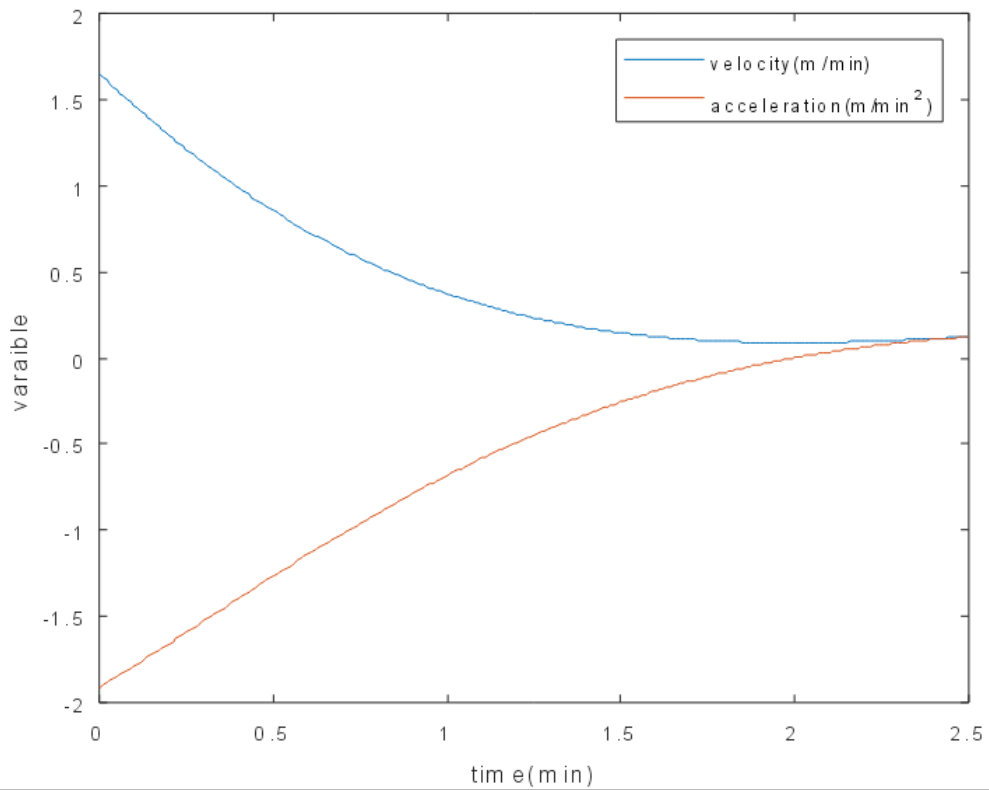
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(153*cos(1751/1000)*exp(-309/200))/80 -
(6*exp(-309/200)*sin(1751/1000))/25, -
(153*cos(3519/2000)*exp(-621/400))/80 -
(6*exp(-621/400)*sin(3519/2000))/25, -
(153*cos(221/125)*exp(-39/25))/80 -
(6*exp(-39/25)*sin(221/125))/25, -
(153*cos(3553/2000)*exp(-627/400))/80 -
(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, -
(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 -

$(6 \cdot \exp(-81/50) \cdot \sin(459/250)) / 25, -$
 $(153 \cdot \cos(3689/2000) \cdot \exp(-651/400)) / 80 -$
 $(6 \cdot \exp(-651/400) \cdot \sin(3689/2000)) / 25, -$
 $(153 \cdot \cos(1853/1000) \cdot \exp(-327/200)) / 80 -$
 $(6 \cdot \exp(-327/200) \cdot \sin(1853/1000)) / 25, -$
 $(153 \cdot \cos(3723/2000) \cdot \exp(-657/400)) / 80 -$
 $(6 \cdot \exp(-657/400) \cdot \sin(3723/2000)) / 25, -$
 $(153 \cdot \cos(187/100) \cdot \exp(-33/20)) / 80 -$
 $(6 \cdot \exp(-33/20) \cdot \sin(187/100)) / 25, -$
 $(153 \cdot \cos(3757/2000) \cdot \exp(-663/400)) / 80 -$
 $(6 \cdot \exp(-663/400) \cdot \sin(3757/2000)) / 25, -$
 $(153 \cdot \cos(1887/1000) \cdot \exp(-333/200)) / 80 -$
 $(6 \cdot \exp(-333/200) \cdot \sin(1887/1000)) / 25, -$
 $(153 \cdot \cos(3791/2000) \cdot \exp(-669/400)) / 80 -$
 $(6 \cdot \exp(-669/400) \cdot \sin(3791/2000)) / 25, -$
 $(153 \cdot \cos(238/125) \cdot \exp(-42/25)) / 80 -$
 $(6 \cdot \exp(-42/25) \cdot \sin(238/125)) / 25, -$
 $(153 \cdot \cos(153/80) \cdot \exp(-27/16)) / 80 -$
 $(6 \cdot \exp(-27/16) \cdot \sin(153/80)) / 25, -$
 $(153 \cdot \cos(1921/1000) \cdot \exp(-339/200)) / 80 -$
 $(6 \cdot \exp(-339/200) \cdot \sin(1921/1000)) / 25, -$
 $(153 \cdot \cos(3859/2000) \cdot \exp(-681/400)) / 80 -$
 $(6 \cdot \exp(-681/400) \cdot \sin(3859/2000)) / 25, -$
 $(153 \cdot \cos(969/500) \cdot \exp(-(6 \cdot \exp(-93/50) \cdot \sin(527/250))) / 25, -$
 $(153 \cdot \cos(4233/2000) \cdot \exp(-747/400)) / 80 -$
 $(6 \cdot \exp(-747/400) \cdot \sin(4233/2000)) / 25, -$
 $(153 \cdot \cos(17/8) \cdot \exp(-15/8)) / 80 - (6 \cdot \exp(-15/8) \cdot \sin(17/8)) / 25]$
 $171/100)) / 80 - (6 \cdot \exp(-171/100) \cdot \sin(969/500)) / 25, -$
 $(153 \cdot \cos(3893/2000) \cdot \exp(-687/400)) / 80 -$
 $(6 \cdot \exp(-687/400) \cdot \sin(3893/2000)) / 25, -$
 $(153 \cdot \cos(391/200) \cdot \exp(-69/40)) / 80 -$
 $(6 \cdot \exp(-69/40) \cdot \sin(391/200)) / 25, -$
 $(153 \cdot \cos(3927/2000) \cdot \exp(-693/400)) / 80 -$
 $(6 \cdot \exp(-693/400) \cdot \sin(3927/2000)) / 25, -$
 $(153 \cdot \cos(493/250) \cdot \exp(-87/50)) / 80 -$
 $(6 \cdot \exp(-87/50) \cdot \sin(493/250)) / 25, -$
 $(153 \cdot \cos(3961/2000) \cdot \exp(-699/400)) / 80 -$
 $(6 \cdot \exp(-699/400) \cdot \sin(3961/2000)) / 25, -$
 $(153 \cdot \cos(1989/1000) \cdot \exp(-351/200)) / 80 -$
 $(6 \cdot \exp(-351/200) \cdot \sin(1989/1000)) / 25, -$

(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 =



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 =

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

e =

60.7291