

AFOLABI ZAINAB OLUWAPELUMI

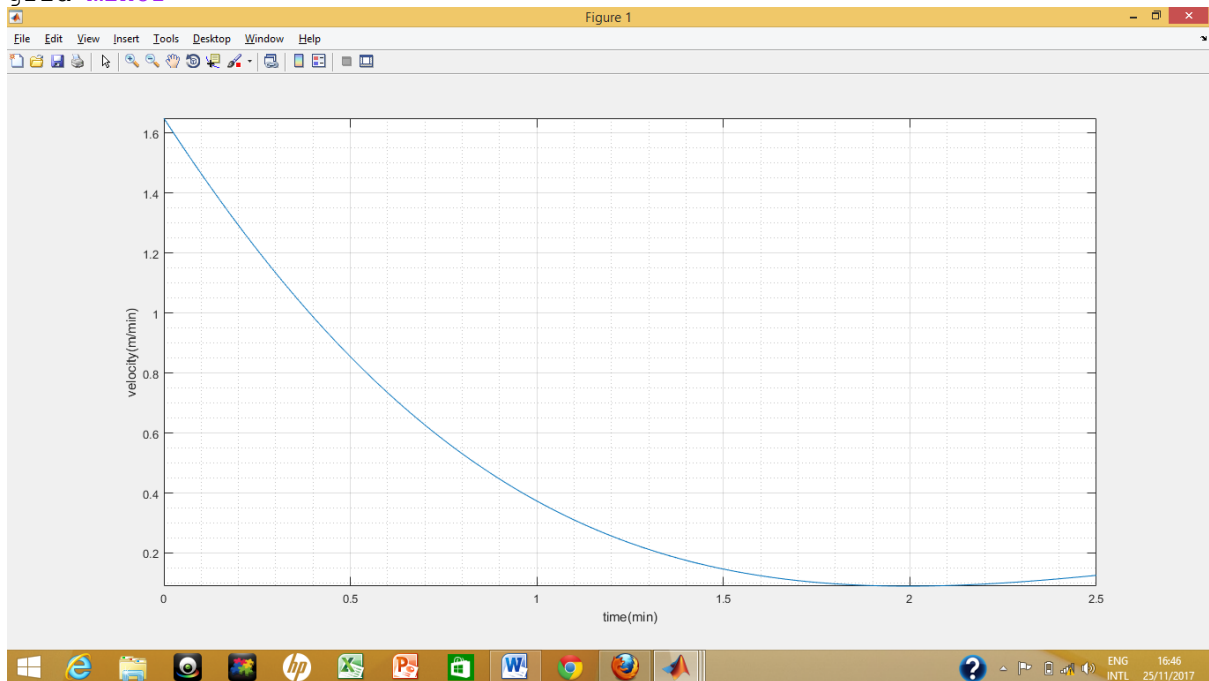
16/ENG05/004

MECHATRONICS

MATLAB TEST

```
1) commandwindow
clear
clc
A = [0 10 4 -2;-3 -17 1 2;1 1 1 0;8 -34 16 -10]
B = [-4;2;6;4]
D = inv(A)
F = D * B
```

```
2) commandwindow
clear
clc
close all
syms t
d= 1.5*exp(-0.75*t)*sin(0.85*t)+(0.375*t)
t=[0:0.01:2.5]
v=diff(d)
vn=subs(v,t)
figure (1)
plot(t,vn)
xlabel('time (min)')
ylabel('velocity (m/min)')
axis tight
grid on
grid minor
```

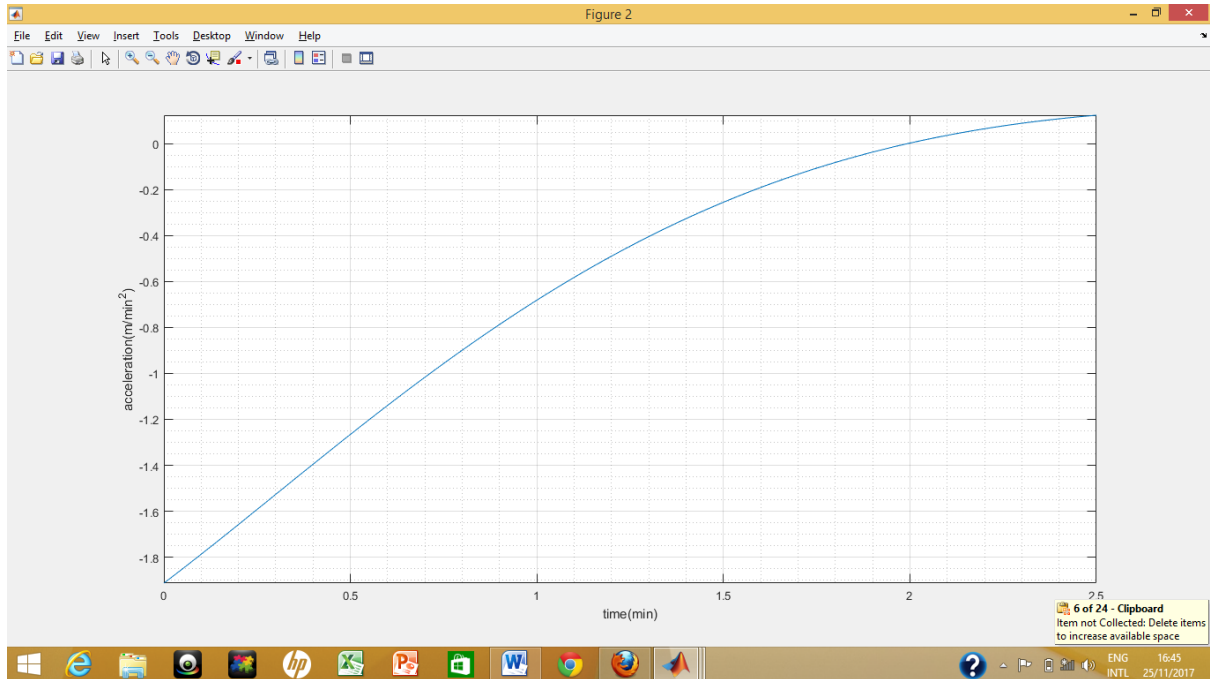


```
a=diff(v)
an=subs(a,t)
figure (2)
```

```

plot(t,an)
xlabel('time (min)')
ylabel('acceleration(m/min^2)')
axis tight
grid on
grid minor

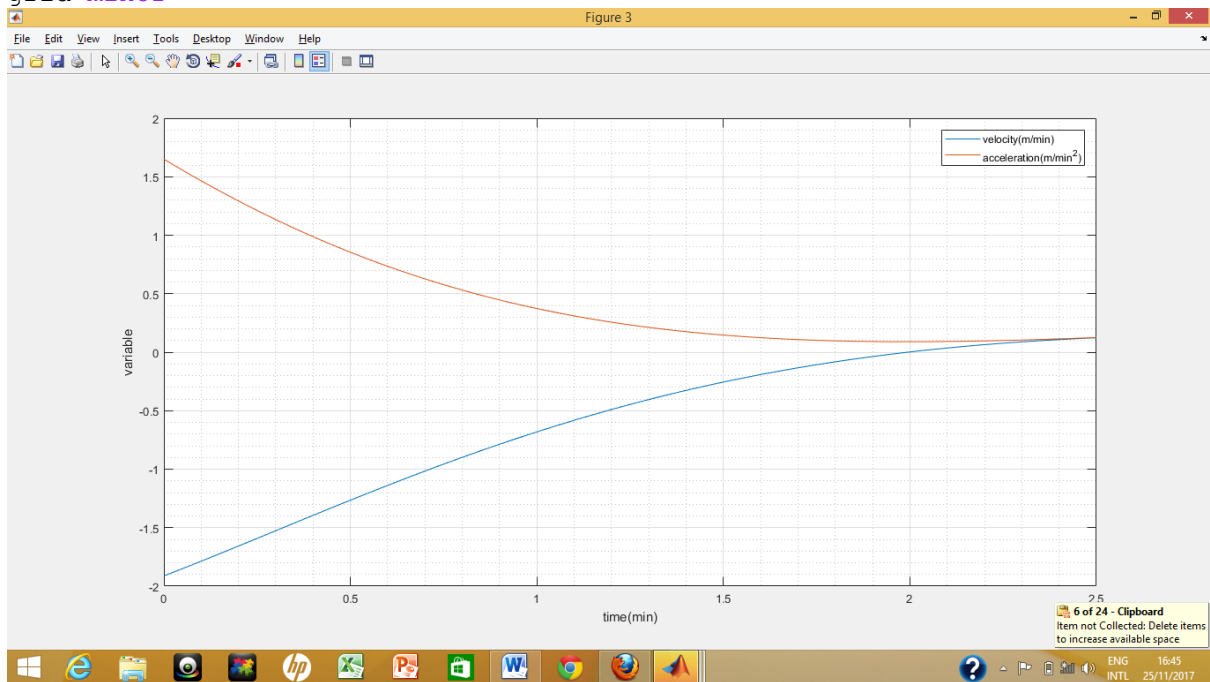
```



```

figure (3)
plot(t,an,t,vn)
xlabel('time (min)')
ylabel('variable')
legend('velocity (m/min)', 'acceleration (m/min^2)')
grid on
grid minor

```



3) commandwindow

```
clear
clc
close all
syms x
y = 5*(sin(5*x))^3
v = int(pi*(y^2),0,pi)
a = double(v)
```

## OUTPUTS

1)

A =

0	10.00	4.00	-2.00
-3.00	-17.00	1.00	2.00
1.00	1.00	1.00	0
8.00	-34.00	16.00	-10.00

B =

-4.00
2.00
6.00
4.00

D =

-0.18	-0.10	0.57	0.02
0.04	-0.02	0.04	-0.01

0.14	0.12	0.39	-0.01
-0.04	0.16	0.96	-0.06

F =

4.00  
-0.00  
2.00  
6.00

2)

d =

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

t =

Columns 1 through 6

0    0.01    0.02    0.03    0.04    0.05

Columns 7 through 12

0.06    0.07    0.08    0.09    0.10    0.11

Columns 13 through 18

0.12    0.13    0.14    0.15    0.16    0.17

Columns 19 through 24

0.18    0.19    0.20    0.21    0.22    0.23

Columns 25 through 30

0.24    0.25    0.26    0.27    0.28    0.29

Columns 31 through 36

0.30    0.31    0.32    0.33    0.34    0.35

Columns 37 through 42

0.36    0.37    0.38    0.39    0.40    0.41

Columns 43 through 48

0.42    0.43    0.44    0.45    0.46    0.47

Columns 49 through 54

0.48    0.49    0.50    0.51    0.52    0.53

Columns 55 through 60

0.54    0.55    0.56    0.57    0.58    0.59

Columns 61 through 66

0.60    0.61    0.62    0.63    0.64    0.65

Columns 67 through 72

0.66    0.67    0.68    0.69    0.70    0.71

Columns 73 through 78

0.72    0.73    0.74    0.75    0.76    0.77

Columns 79 through 84

0.78    0.79    0.80    0.81    0.82    0.83

Columns 85 through 90

0.84    0.85    0.86    0.87    0.88    0.89

Columns 91 through 96

0.90 0.91 0.92 0.93 0.94 0.95

Columns 97 through 102

0.96 0.97 0.98 0.99 1.00 1.01

Columns 103 through 108

1.02 1.03 1.04 1.05 1.06 1.07

Columns 109 through 114

1.08 1.09 1.10 1.11 1.12 1.13

Columns 115 through 120

1.14 1.15 1.16 1.17 1.18 1.19

Columns 121 through 126

1.20 1.21 1.22 1.23 1.24 1.25

Columns 127 through 132

1.26 1.27 1.28 1.29 1.30 1.31

Columns 133 through 138

1.32 1.33 1.34 1.35 1.36 1.37

Columns 139 through 144

1.38 1.39 1.40 1.41 1.42 1.43

Columns 145 through 150

1.44 1.45 1.46 1.47 1.48 1.49

Columns 151 through 156

1.50 1.51 1.52 1.53 1.54 1.55

Columns 157 through 162

1.56 1.57 1.58 1.59 1.60 1.61

Columns 163 through 168

1.62 1.63 1.64 1.65 1.66 1.67

Columns 169 through 174

1.68 1.69 1.70 1.71 1.72 1.73



Columns 175 through 180

1.74 1.75 1.76 1.77 1.78 1.79

Columns 181 through 186

1.80 1.81 1.82 1.83 1.84 1.85

Columns 187 through 192

1.86 1.87 1.88 1.89 1.90 1.91

Columns 193 through 198

1.92 1.93 1.94 1.95 1.96 1.97

Columns 199 through 204

1.98 1.99 2.00 2.01 2.02 2.03

Columns 205 through 210

2.04 2.05 2.06 2.07 2.08 2.09

Columns 211 through 216

2.10 2.11 2.12 2.13 2.14 2.15

Columns 217 through 222

2.16 2.17 2.18 2.19 2.20 2.21

Columns 223 through 228

2.22 2.23 2.24 2.25 2.26 2.27

Columns 229 through 234

2.28 2.29 2.30 2.31 2.32 2.33

Columns 235 through 240

2.34 2.35 2.36 2.37 2.38 2.39

Columns 241 through 246

2.40 2.41 2.42 2.43 2.44 2.45

Columns 247 through 251

2.46 2.47 2.48 2.49 2.50

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, \\
 & (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,
 \end{aligned}$$

$(51 \cdot \cos(357/1000) \cdot \exp(-63/200))/40 - (9 \cdot \exp(-63/200) \cdot \sin(357/1000))/8 + 3/8,$   
 $(51 \cdot \cos(731/2000) \cdot \exp(-129/400))/40 - (9 \cdot \exp(-129/400) \cdot \sin(731/2000))/8 + 3/8,$   
 $(51 \cdot \cos(187/500) \cdot \exp(-33/100))/40 - (9 \cdot \exp(-33/100) \cdot \sin(187/500))/8 + 3/8,$   
 $(51 \cdot \cos(153/400) \cdot \exp(-27/80))/40 - (9 \cdot \exp(-27/80) \cdot \sin(153/400))/8 + 3/8, (51 \cdot \cos(391/1000) \cdot \exp(-69/200))/40 - (9 \cdot \exp(-69/200) \cdot \sin(391/1000))/8 + 3/8, (51 \cdot \cos(799/2000) \cdot \exp(-141/400))/40 - (9 \cdot \exp(-141/400) \cdot \sin(799/2000))/8 + 3/8, (51 \cdot \cos(51/125) \cdot \exp(-9/25))/40 - (9 \cdot \exp(-9/25) \cdot \sin(51/125))/8 + 3/8, (51 \cdot \cos(833/2000) \cdot \exp(-147/400))/40 - (9 \cdot \exp(-147/400) \cdot \sin(833/2000))/8 + 3/8, (51 \cdot \cos(17/40) \cdot \exp(-3/8))/40 - (9 \cdot \exp(-3/8) \cdot \sin(17/40))/8 + 3/8, (51 \cdot \cos(867/2000) \cdot \exp(-153/400))/40 - (9 \cdot \exp(-153/400) \cdot \sin(867/2000))/8 + 3/8, (51 \cdot \cos(221/500) \cdot \exp(-39/100))/40 - (9 \cdot \exp(-39/100) \cdot \sin(221/500))/8 + 3/8, (51 \cdot \cos(901/2000) \cdot \exp(-159/400))/40 - (9 \cdot \exp(-159/400) \cdot \sin(901/2000))/8 + 3/8, (51 \cdot \cos(459/1000) \cdot \exp(-81/200))/40 - (9 \cdot \exp(-81/200) \cdot \sin(459/1000))/8 + 3/8, (51 \cdot \cos(187/400) \cdot \exp(-33/80))/40 - (9 \cdot \exp(-33/80) \cdot \sin(187/400))/8 + 3/8, (51 \cdot \cos(119/250) \cdot \exp(-21/50))/40 - (9 \cdot \exp(-21/50) \cdot \sin(119/250))/8 + 3/8, (51 \cdot \cos(969/2000) \cdot \exp(-171/400))/40 - (9 \cdot \exp(-171/400) \cdot \sin(969/2000))/8 + 3/8, (51 \cdot \cos(493/1000) \cdot \exp(-87/200))/40 - (9 \cdot \exp(-87/200) \cdot \sin(493/1000))/8 + 3/8, (51 \cdot \cos(1003/2000) \cdot \exp(-177/400))/40 - (9 \cdot \exp(-177/400) \cdot \sin(1003/2000))/8 + 3/8, (51 \cdot \cos(51/100) \cdot \exp(-9/20))/40 - (9 \cdot \exp(-9/20) \cdot \sin(51/100))/8 + 3/8, (51 \cdot \cos(1037/2000) \cdot \exp(-183/400))/40 - (9 \cdot \exp(-183/400) \cdot \sin(1037/2000))/8 + 3/8, (51 \cdot \cos(527/1000) \cdot \exp(-93/200))/40 - (9 \cdot \exp(-93/200) \cdot \sin(527/1000))/8 + 3/8, (51 \cdot \cos(1071/2000) \cdot \exp(-189/400))/40 - (9 \cdot \exp(-189/400) \cdot \sin(1071/2000))/8 + 3/8, (51 \cdot \cos(68/125) \cdot \exp(-12/25))/40 - (9 \cdot \exp(-12/25) \cdot \sin(68/125))/8 + 3/8, (51 \cdot \cos(221/400) \cdot \exp(-39/80))/40 - (9 \cdot \exp(-39/80) \cdot \sin(221/400))/8 + 3/8, (51 \cdot \cos(561/1000) \cdot \exp(-99/200))/40 - (9 \cdot \exp(-99/200) \cdot \sin(561/1000))/8 + 3/8, (51 \cdot \cos(1139/2000) \cdot \exp(-201/400))/40 - (9 \cdot \exp(-201/400) \cdot \sin(1139/2000))/8 + 3/8, (51 \cdot \cos(289/500) \cdot \exp(-51/100))/40 - (9 \cdot \exp(-51/100) \cdot \sin(289/500))/8 + 3/8, (51 \cdot \cos(1173/2000) \cdot \exp(-207/400))/40 - (9 \cdot \exp(-207/400) \cdot \sin(1173/2000))/8 + 3/8, (51 \cdot \cos(119/200) \cdot \exp(-21/40))/40 - (9 \cdot \exp(-21/40) \cdot \sin(119/200))/8 + 3/8, (51 \cdot \cos(1207/2000) \cdot \exp(-213/400))/40 - (9 \cdot \exp(-213/400) \cdot \sin(1207/2000))/8 + 3/8, (51 \cdot \cos(153/250) \cdot \exp(-27/50))/40 - (9 \cdot \exp(-27/50) \cdot \sin(153/250))/8 + 3/8, (51 \cdot \cos(1241/2000) \cdot \exp(-219/400))/40 - (9 \cdot \exp(-219/400) \cdot \sin(1241/2000))/8 + 3/8, (51 \cdot \cos(629/1000) \cdot \exp(-111/200))/40 - (9 \cdot \exp(-111/200) \cdot \sin(629/1000))/8 + 3/8, (51 \cdot \cos(51/80) \cdot \exp(-9/16))/40 - (9 \cdot \exp(-9/16) \cdot \sin(51/80))/8 + 3/8, (51 \cdot \cos(323/500) \cdot \exp(-57/100))/40 - (9 \cdot \exp(-57/100) \cdot \sin(323/500))/8 + 3/8, (51 \cdot \cos(1309/2000) \cdot \exp(-231/400))/40 - (9 \cdot \exp(-231/400) \cdot \sin(1309/2000))/8 + 3/8, (51 \cdot \cos(663/1000) \cdot \exp(-117/200))/40 - (9 \cdot \exp(-117/200) \cdot \sin(663/1000))/8 + 3/8, (51 \cdot \cos(1343/2000) \cdot \exp(-237/400))/40 - (9 \cdot \exp(-237/400) \cdot \sin(1343/2000))/8 + 3/8, (51 \cdot \cos(17/25) \cdot \exp(-3/5))/40 - (9 \cdot \exp(-3/5) \cdot \sin(17/25))/8 + 3/8, (51 \cdot \cos(1377/2000) \cdot \exp(-243/400))/40 - (9 \cdot \exp(-243/400) \cdot \sin(1377/2000))/8 + 3/8, (51 \cdot \cos(697/1000) \cdot \exp(-123/200))/40 - (9 \cdot \exp(-123/200) \cdot \sin(697/1000))/8 + 3/8, (51 \cdot \cos(1411/2000) \cdot \exp(-249/400))/40 - (9 \cdot \exp(-249/400) \cdot \sin(1411/2000))/8 + 3/8, (51 \cdot \cos(357/500) \cdot \exp(-63/100))/40 - (9 \cdot \exp(-63/100) \cdot \sin(357/500))/8 + 3/8, (51 \cdot \cos(289/400) \cdot \exp(-51/80))/40 - (9 \cdot \exp(-51/80) \cdot \sin(289/400))/8 + 3/8, (51 \cdot \cos(731/1000) \cdot \exp(-129/200))/40 - (9 \cdot \exp(-129/200) \cdot \sin(731/1000))/8 + 3/8, (51 \cdot \cos(1479/2000) \cdot \exp(-261/400))/40 - (9 \cdot \exp(-261/400) \cdot \sin(1479/2000))/8 + 3/8, (51 \cdot \cos(187/250) \cdot \exp(-33/50))/40 - (9 \cdot \exp(-33/50) \cdot \sin(187/250))/8 + 3/8, (51 \cdot \cos(1513/2000) \cdot \exp(-267/400))/40 - (9 \cdot \exp(-267/400) \cdot \sin(1513/2000))/8 + 3/8, (51 \cdot \cos(153/200) \cdot \exp(-27/40))/40 - (9 \cdot \exp(-27/40) \cdot \sin(153/200))/8 + 3/8,$

$(51 \cdot \cos(1547/2000) \cdot \exp(-273/400))/40 - (9 \cdot \exp(-273/400) \cdot \sin(1547/2000))/8 + 3/8,$   
 $(51 \cdot \cos(391/500) \cdot \exp(-69/100))/40 - (9 \cdot \exp(-69/100) \cdot \sin(391/500))/8 + 3/8,$   
 $(51 \cdot \cos(1581/2000) \cdot \exp(-279/400))/40 - (9 \cdot \exp(-279/400) \cdot \sin(1581/2000))/8 + 3/8,$   
 $(51 \cdot \cos(799/1000) \cdot \exp(-141/200))/40 - (9 \cdot \exp(-141/200) \cdot \sin(799/1000))/8 + 3/8,$   
 $(51 \cdot \cos(323/400) \cdot \exp(-57/80))/40 - (9 \cdot \exp(-57/80) \cdot \sin(323/400))/8 + 3/8, (51 \cdot \cos(102/125) \cdot \exp(-18/25))/40 - (9 \cdot \exp(-18/25) \cdot \sin(102/125))/8 + 3/8, (51 \cdot \cos(1649/2000) \cdot \exp(-291/400))/40 - (9 \cdot \exp(-291/400) \cdot \sin(1649/2000))/8 + 3/8, (51 \cdot \cos(833/1000) \cdot \exp(-147/200))/40 - (9 \cdot \exp(-147/200) \cdot \sin(833/1000))/8 + 3/8, (51 \cdot \cos(1683/2000) \cdot \exp(-297/400))/40 - (9 \cdot \exp(-297/400) \cdot \sin(1683/2000))/8 + 3/8, (51 \cdot \cos(17/20) \cdot \exp(-3/4))/40 - (9 \cdot \exp(-3/4) \cdot \sin(17/20))/8 + 3/8, (51 \cdot \cos(1717/2000) \cdot \exp(-303/400))/40 - (9 \cdot \exp(-303/400) \cdot \sin(1717/2000))/8 + 3/8, (51 \cdot \cos(867/1000) \cdot \exp(-153/200))/40 - (9 \cdot \exp(-153/200) \cdot \sin(867/1000))/8 + 3/8, (51 \cdot \cos(1751/2000) \cdot \exp(-309/400))/40 - (9 \cdot \exp(-309/400) \cdot \sin(1751/2000))/8 + 3/8, (51 \cdot \cos(221/250) \cdot \exp(-39/50))/40 - (9 \cdot \exp(-39/50) \cdot \sin(221/250))/8 + 3/8, (51 \cdot \cos(357/400) \cdot \exp(-63/80))/40 - (9 \cdot \exp(-63/80) \cdot \sin(357/400))/8 + 3/8, (51 \cdot \cos(901/1000) \cdot \exp(-159/200))/40 - (9 \cdot \exp(-159/200) \cdot \sin(901/1000))/8 + 3/8, (51 \cdot \cos(1819/2000) \cdot \exp(-321/400))/40 - (9 \cdot \exp(-321/400) \cdot \sin(1819/2000))/8 + 3/8, (51 \cdot \cos(459/500) \cdot \exp(-81/100))/40 - (9 \cdot \exp(-81/100) \cdot \sin(459/500))/8 + 3/8, (51 \cdot \cos(1853/2000) \cdot \exp(-327/400))/40 - (9 \cdot \exp(-327/400) \cdot \sin(1853/2000))/8 + 3/8, (51 \cdot \cos(187/200) \cdot \exp(-33/40))/40 - (9 \cdot \exp(-33/40) \cdot \sin(187/200))/8 + 3/8, (51 \cdot \cos(1887/2000) \cdot \exp(-333/400))/40 - (9 \cdot \exp(-333/400) \cdot \sin(1887/2000))/8 + 3/8, (51 \cdot \cos(119/125) \cdot \exp(-21/25))/40 - (9 \cdot \exp(-21/25) \cdot \sin(119/125))/8 + 3/8, (51 \cdot \cos(1921/2000) \cdot \exp(-339/400))/40 - (9 \cdot \exp(-339/400) \cdot \sin(1921/2000))/8 + 3/8, (51 \cdot \cos(969/1000) \cdot \exp(-171/200))/40 - (9 \cdot \exp(-171/200) \cdot \sin(969/1000))/8 + 3/8, (51 \cdot \cos(391/400) \cdot \exp(-69/80))/40 - (9 \cdot \exp(-69/80) \cdot \sin(391/400))/8 + 3/8, (51 \cdot \cos(493/500) \cdot \exp(-87/100))/40 - (9 \cdot \exp(-87/100) \cdot \sin(493/500))/8 + 3/8, (51 \cdot \cos(1989/2000) \cdot \exp(-351/400))/40 - (9 \cdot \exp(-351/400) \cdot \sin(1989/2000))/8 + 3/8, (51 \cdot \cos(1003/1000) \cdot \exp(-177/200))/40 - (9 \cdot \exp(-177/200) \cdot \sin(1003/1000))/8 + 3/8, (51 \cdot \cos(2023/2000) \cdot \exp(-357/400))/40 - (9 \cdot \exp(-357/400) \cdot \sin(2023/2000))/8 + 3/8, (51 \cdot \cos(51/50) \cdot \exp(-9/10))/40 - (9 \cdot \exp(-9/10) \cdot \sin(51/50))/8 + 3/8, (51 \cdot \cos(2057/2000) \cdot \exp(-363/400))/40 - (9 \cdot \exp(-363/400) \cdot \sin(2057/2000))/8 + 3/8, (51 \cdot \cos(1037/1000) \cdot \exp(-183/200))/40 - (9 \cdot \exp(-183/200) \cdot \sin(1037/1000))/8 + 3/8, (51 \cdot \cos(2091/2000) \cdot \exp(-369/400))/40 - (9 \cdot \exp(-369/400) \cdot \sin(2091/2000))/8 + 3/8, (51 \cdot \cos(527/500) \cdot \exp(-93/100))/40 - (9 \cdot \exp(-93/100) \cdot \sin(527/500))/8 + 3/8, (51 \cdot \cos(17/16) \cdot \exp(-15/16))/40 - (9 \cdot \exp(-15/16) \cdot \sin(17/16))/8 + 3/8, (51 \cdot \cos(1071/1000) \cdot \exp(-189/200))/40 - (9 \cdot \exp(-189/200) \cdot \sin(1071/1000))/8 + 3/8, (51 \cdot \cos(2159/2000) \cdot \exp(-381/400))/40 - (9 \cdot \exp(-381/400) \cdot \sin(2159/2000))/8 + 3/8, (51 \cdot \cos(136/125) \cdot \exp(-24/25))/40 - (9 \cdot \exp(-24/25) \cdot \sin(136/125))/8 + 3/8, (51 \cdot \cos(2193/2000) \cdot \exp(-387/400))/40 - (9 \cdot \exp(-387/400) \cdot \sin(2193/2000))/8 + 3/8, (51 \cdot \cos(221/200) \cdot \exp(-39/40))/40 - (9 \cdot \exp(-39/40) \cdot \sin(221/200))/8 + 3/8, (51 \cdot \cos(2227/2000) \cdot \exp(-393/400))/40 - (9 \cdot \exp(-393/400) \cdot \sin(2227/2000))/8 + 3/8, (51 \cdot \cos(561/500) \cdot \exp(-99/100))/40 - (9 \cdot \exp(-99/100) \cdot \sin(561/500))/8 + 3/8, (51 \cdot \cos(2261/2000) \cdot \exp(-399/400))/40 - (9 \cdot \exp(-399/400) \cdot \sin(2261/2000))/8 + 3/8, (51 \cdot \cos(1139/1000) \cdot \exp(-201/200))/40 - (9 \cdot \exp(-201/200) \cdot \sin(1139/1000))/8 + 3/8, (51 \cdot \cos(459/400) \cdot \exp(-81/80))/40 - (9 \cdot \exp(-81/80) \cdot \sin(459/400))/8 + 3/8, (51 \cdot \cos(289/250) \cdot \exp(-51/50))/40 - (9 \cdot \exp(-51/50) \cdot \sin(289/250))/8 + 3/8, (51 \cdot \cos(2329/2000) \cdot \exp(-411/400))/40 - (9 \cdot \exp(-411/400) \cdot \sin(2329/2000))/8 + 3/8, (51 \cdot \cos(1173/1000) \cdot \exp(-207/200))/40 - (9 \cdot \exp(-207/200) \cdot \sin(1173/1000))/8 + 3/8,$

$(51 \cdot \cos(2363/2000) \cdot \exp(-417/400))/40 - (9 \cdot \exp(-417/400) \cdot \sin(2363/2000))/8 + 3/8,$   
 $(51 \cdot \cos(119/100) \cdot \exp(-21/20))/40 - (9 \cdot \exp(-21/20) \cdot \sin(119/100))/8 + 3/8,$   
 $(51 \cdot \cos(2397/2000) \cdot \exp(-423/400))/40 - (9 \cdot \exp(-423/400) \cdot \sin(2397/2000))/8 + 3/8,$   
 $(51 \cdot \cos(1207/1000) \cdot \exp(-213/200))/40 - (9 \cdot \exp(-213/200) \cdot \sin(1207/1000))/8 + 3/8,$   
 $(51 \cdot \cos(2431/2000) \cdot \exp(-429/400))/40 - (9 \cdot \exp(-429/400) \cdot \sin(2431/2000))/8 + 3/8,$   
 $(51 \cdot \cos(153/125) \cdot \exp(-27/25))/40 - (9 \cdot \exp(-27/25) \cdot \sin(153/125))/8 + 3/8, (51 \cdot \cos(493/400) \cdot \exp(-$   
 $87/80))/40 - (9 \cdot \exp(-87/80) \cdot \sin(493/400))/8 + 3/8, (51 \cdot \cos(1241/1000) \cdot \exp(-219/200))/40 -$   
 $(9 \cdot \exp(-219/200) \cdot \sin(1241/1000))/8 + 3/8, (51 \cdot \cos(2499/2000) \cdot \exp(-441/400))/40 - (9 \cdot \exp(-$   
 $441/400) \cdot \sin(2499/2000))/8 + 3/8, (51 \cdot \cos(629/500) \cdot \exp(-111/100))/40 - (9 \cdot \exp(-$   
 $111/100) \cdot \sin(629/500))/8 + 3/8, (51 \cdot \cos(2533/2000) \cdot \exp(-447/400))/40 - (9 \cdot \exp(-$   
 $447/400) \cdot \sin(2533/2000))/8 + 3/8, (51 \cdot \cos(51/40) \cdot \exp(-9/8))/40 - (9 \cdot \exp(-9/8) \cdot \sin(51/40))/8 + 3/8,$   
 $(51 \cdot \cos(2567/2000) \cdot \exp(-453/400))/40 - (9 \cdot \exp(-453/400) \cdot \sin(2567/2000))/8 + 3/8,$   
 $(51 \cdot \cos(323/250) \cdot \exp(-57/50))/40 - (9 \cdot \exp(-57/50) \cdot \sin(323/250))/8 + 3/8,$   
 $(51 \cdot \cos(2601/2000) \cdot \exp(-459/400))/40 - (9 \cdot \exp(-459/400) \cdot \sin(2601/2000))/8 + 3/8,$   
 $(51 \cdot \cos(1309/1000) \cdot \exp(-231/200))/40 - (9 \cdot \exp(-231/200) \cdot \sin(1309/1000))/8 + 3/8,$   
 $(51 \cdot \cos(527/400) \cdot \exp(-93/80))/40 - (9 \cdot \exp(-93/80) \cdot \sin(527/400))/8 + 3/8, (51 \cdot \cos(663/500) \cdot \exp(-$   
 $117/100))/40 - (9 \cdot \exp(-117/100) \cdot \sin(663/500))/8 + 3/8, (51 \cdot \cos(2669/2000) \cdot \exp(-471/400))/40 -$   
 $(9 \cdot \exp(-471/400) \cdot \sin(2669/2000))/8 + 3/8, (51 \cdot \cos(1343/1000) \cdot \exp(-237/200))/40 - (9 \cdot \exp(-$   
 $237/200) \cdot \sin(1343/1000))/8 + 3/8, (51 \cdot \cos(2703/2000) \cdot \exp(-477/400))/40 - (9 \cdot \exp(-$   
 $477/400) \cdot \sin(2703/2000))/8 + 3/8, (51 \cdot \cos(34/25) \cdot \exp(-6/5))/40 - (9 \cdot \exp(-6/5) \cdot \sin(34/25))/8 + 3/8,$   
 $(51 \cdot \cos(2737/2000) \cdot \exp(-483/400))/40 - (9 \cdot \exp(-483/400) \cdot \sin(2737/2000))/8 + 3/8,$   
 $(51 \cdot \cos(1377/1000) \cdot \exp(-243/200))/40 - (9 \cdot \exp(-243/200) \cdot \sin(1377/1000))/8 + 3/8,$   
 $(51 \cdot \cos(2771/2000) \cdot \exp(-489/400))/40 - (9 \cdot \exp(-489/400) \cdot \sin(2771/2000))/8 + 3/8,$   
 $(51 \cdot \cos(697/500) \cdot \exp(-123/100))/40 - (9 \cdot \exp(-123/100) \cdot \sin(697/500))/8 + 3/8,$   
 $(51 \cdot \cos(561/400) \cdot \exp(-99/80))/40 - (9 \cdot \exp(-99/80) \cdot \sin(561/400))/8 + 3/8,$   
 $(51 \cdot \cos(1411/1000) \cdot \exp(-249/200))/40 - (9 \cdot \exp(-249/200) \cdot \sin(1411/1000))/8 + 3/8,$   
 $(51 \cdot \cos(2839/2000) \cdot \exp(-501/400))/40 - (9 \cdot \exp(-501/400) \cdot \sin(2839/2000))/8 + 3/8,$   
 $(51 \cdot \cos(357/250) \cdot \exp(-63/50))/40 - (9 \cdot \exp(-63/50) \cdot \sin(357/250))/8 + 3/8,$   
 $(51 \cdot \cos(2873/2000) \cdot \exp(-507/400))/40 - (9 \cdot \exp(-507/400) \cdot \sin(2873/2000))/8 + 3/8,$   
 $(51 \cdot \cos(289/200) \cdot \exp(-51/40))/40 - (9 \cdot \exp(-51/40) \cdot \sin(289/200))/8 + 3/8,$   
 $(51 \cdot \cos(2907/2000) \cdot \exp(-513/400))/40 - (9 \cdot \exp(-513/400) \cdot \sin(2907/2000))/8 + 3/8,$   
 $(51 \cdot \cos(731/500) \cdot \exp(-129/100))/40 - (9 \cdot \exp(-129/100) \cdot \sin(731/500))/8 + 3/8,$   
 $(51 \cdot \cos(2941/2000) \cdot \exp(-519/400))/40 - (9 \cdot \exp(-519/400) \cdot \sin(2941/2000))/8 + 3/8,$   
 $(51 \cdot \cos(1479/1000) \cdot \exp(-261/200))/40 - (9 \cdot \exp(-261/200) \cdot \sin(1479/1000))/8 + 3/8,$   
 $(51 \cdot \cos(119/80) \cdot \exp(-21/16))/40 - (9 \cdot \exp(-21/16) \cdot \sin(119/80))/8 + 3/8, (51 \cdot \cos(187/125) \cdot \exp(-$   
 $33/25))/40 - (9 \cdot \exp(-33/25) \cdot \sin(187/125))/8 + 3/8, (51 \cdot \cos(3009/2000) \cdot \exp(-531/400))/40 -$   
 $(9 \cdot \exp(-531/400) \cdot \sin(3009/2000))/8 + 3/8, (51 \cdot \cos(1513/1000) \cdot \exp(-267/200))/40 - (9 \cdot \exp(-$   
 $267/200) \cdot \sin(1513/1000))/8 + 3/8, (51 \cdot \cos(3043/2000) \cdot \exp(-537/400))/40 - (9 \cdot \exp(-$   
 $537/400) \cdot \sin(3043/2000))/8 + 3/8, (51 \cdot \cos(153/100) \cdot \exp(-27/20))/40 - (9 \cdot \exp(-$   
 $27/20) \cdot \sin(153/100))/8 + 3/8, (51 \cdot \cos(3077/2000) \cdot \exp(-543/400))/40 - (9 \cdot \exp(-$   
 $543/400) \cdot \sin(3077/2000))/8 + 3/8, (51 \cdot \cos(1547/1000) \cdot \exp(-273/200))/40 - (9 \cdot \exp(-$   
 $273/200) \cdot \sin(1547/1000))/8 + 3/8, (51 \cdot \cos(3111/2000) \cdot \exp(-549/400))/40 - (9 \cdot \exp(-$   
 $549/400) \cdot \sin(3111/2000))/8 + 3/8, (51 \cdot \cos(391/250) \cdot \exp(-69/50))/40 - (9 \cdot \exp(-$   
 $69/50) \cdot \sin(391/250))/8 + 3/8, (51 \cdot \cos(629/400) \cdot \exp(-111/80))/40 - (9 \cdot \exp(-$   
 $111/80) \cdot \sin(629/400))/8 + 3/8, (51 \cdot \cos(1581/1000) \cdot \exp(-279/200))/40 - (9 \cdot \exp(-$

$279/200) * \sin(1581/1000))/8 + 3/8, (51 * \cos(3179/2000) * \exp(-561/400))/40 - (9 * \exp(-561/400) * \sin(3179/2000))/8 + 3/8, (51 * \cos(799/500) * \exp(-141/100))/40 - (9 * \exp(-141/100) * \sin(799/500))/8 + 3/8, (51 * \cos(3213/2000) * \exp(-567/400))/40 - (9 * \exp(-567/400) * \sin(3213/2000))/8 + 3/8, (51 * \cos(323/200) * \exp(-57/40))/40 - (9 * \exp(-57/40) * \sin(323/200))/8 + 3/8, (51 * \cos(3247/2000) * \exp(-573/400))/40 - (9 * \exp(-573/400) * \sin(3247/2000))/8 + 3/8, (51 * \cos(204/125) * \exp(-36/25))/40 - (9 * \exp(-36/25) * \sin(204/125))/8 + 3/8, (51 * \cos(3281/2000) * \exp(-579/400))/40 - (9 * \exp(-579/400) * \sin(3281/2000))/8 + 3/8, (51 * \cos(1649/1000) * \exp(-291/200))/40 - (9 * \exp(-291/200) * \sin(1649/1000))/8 + 3/8, (51 * \cos(663/400) * \exp(-117/80))/40 - (9 * \exp(-117/80) * \sin(663/400))/8 + 3/8, (51 * \cos(833/500) * \exp(-147/100))/40 - (9 * \exp(-147/100) * \sin(833/500))/8 + 3/8, (51 * \cos(3349/2000) * \exp(-591/400))/40 - (9 * \exp(-591/400) * \sin(3349/2000))/8 + 3/8, (51 * \cos(1683/1000) * \exp(-297/200))/40 - (9 * \exp(-297/200) * \sin(1683/1000))/8 + 3/8, (51 * \cos(3383/2000) * \exp(-597/400))/40 - (9 * \exp(-597/400) * \sin(3383/2000))/8 + 3/8, (51 * \cos(17/10) * \exp(-3/2))/40 - (9 * \exp(-3/2) * \sin(17/10))/8 + 3/8, (51 * \cos(3417/2000) * \exp(-603/400))/40 - (9 * \exp(-603/400) * \sin(3417/2000))/8 + 3/8, (51 * \cos(1717/1000) * \exp(-303/200))/40 - (9 * \exp(-303/200) * \sin(1717/1000))/8 + 3/8, (51 * \cos(3451/2000) * \exp(-609/400))/40 - (9 * \exp(-609/400) * \sin(3451/2000))/8 + 3/8, (51 * \cos(867/500) * \exp(-153/100))/40 - (9 * \exp(-153/100) * \sin(867/500))/8 + 3/8, (51 * \cos(697/400) * \exp(-123/80))/40 - (9 * \exp(-123/80) * \sin(697/400))/8 + 3/8, (51 * \cos(1751/1000) * \exp(-309/200))/40 - (9 * \exp(-309/200) * \sin(1751/1000))/8 + 3/8, (51 * \cos(3519/2000) * \exp(-621/400))/40 - (9 * \exp(-621/400) * \sin(3519/2000))/8 + 3/8, (51 * \cos(221/125) * \exp(-39/25))/40 - (9 * \exp(-39/25) * \sin(221/125))/8 + 3/8, (51 * \cos(3553/2000) * \exp(-627/400))/40 - (9 * \exp(-627/400) * \sin(3553/2000))/8 + 3/8, (51 * \cos(357/200) * \exp(-63/40))/40 - (9 * \exp(-63/40) * \sin(357/200))/8 + 3/8, (51 * \cos(3587/2000) * \exp(-633/400))/40 - (9 * \exp(-633/400) * \sin(3587/2000))/8 + 3/8, (51 * \cos(901/500) * \exp(-159/100))/40 - (9 * \exp(-159/100) * \sin(901/500))/8 + 3/8, (51 * \cos(3621/2000) * \exp(-639/400))/40 - (9 * \exp(-639/400) * \sin(3621/2000))/8 + 3/8, (51 * \cos(1819/1000) * \exp(-321/200))/40 - (9 * \exp(-321/200) * \sin(1819/1000))/8 + 3/8, (51 * \cos(731/400) * \exp(-129/80))/40 - (9 * \exp(-129/80) * \sin(731/400))/8 + 3/8, (51 * \cos(459/250) * \exp(-81/50))/40 - (9 * \exp(-81/50) * \sin(459/250))/8 + 3/8, (51 * \cos(3689/2000) * \exp(-651/400))/40 - (9 * \exp(-651/400) * \sin(3689/2000))/8 + 3/8, (51 * \cos(1853/1000) * \exp(-327/200))/40 - (9 * \exp(-327/200) * \sin(1853/1000))/8 + 3/8, (51 * \cos(3723/2000) * \exp(-657/400))/40 - (9 * \exp(-657/400) * \sin(3723/2000))/8 + 3/8, (51 * \cos(187/100) * \exp(-33/20))/40 - (9 * \exp(-33/20) * \sin(187/100))/8 + 3/8, (51 * \cos(3757/2000) * \exp(-663/400))/40 - (9 * \exp(-663/400) * \sin(3757/2000))/8 + 3/8, (51 * \cos(1887/1000) * \exp(-333/200))/40 - (9 * \exp(-333/200) * \sin(1887/1000))/8 + 3/8, (51 * \cos(3791/2000) * \exp(-669/400))/40 - (9 * \exp(-669/400) * \sin(3791/2000))/8 + 3/8, (51 * \cos(238/125) * \exp(-42/25))/40 - (9 * \exp(-42/25) * \sin(238/125))/8 + 3/8, (51 * \cos(153/80) * \exp(-27/16))/40 - (9 * \exp(-27/16) * \sin(153/80))/8 + 3/8, (51 * \cos(1921/1000) * \exp(-339/200))/40 - (9 * \exp(-339/200) * \sin(1921/1000))/8 + 3/8, (51 * \cos(3859/2000) * \exp(-681/400))/40 - (9 * \exp(-681/400) * \sin(3859/2000))/8 + 3/8, (51 * \cos(969/500) * \exp(-171/100))/40 - (9 * \exp(-171/100) * \sin(969/500))/8 + 3/8, (51 * \cos(3893/2000) * \exp(-687/400))/40 - (9 * \exp(-687/400) * \sin(3893/2000))/8 + 3/8, (51 * \cos(391/200) * \exp(-69/40))/40 - (9 * \exp(-69/40) * \sin(391/200))/8 + 3/8, (51 * \cos(3927/2000) * \exp(-693/400))/40 - (9 * \exp(-693/400) * \sin(3927/2000))/8 + 3/8, (51 * \cos(493/250) * \exp(-87/50))/40 - (9 * \exp(-87/50) * \sin(493/250))/8 + 3/8,$

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

a =

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

an =

$[-153/80, - (153 * \cos(17/2000) * \exp(-3/400))/80 - (6 * \exp(-3/400) * \sin(17/2000))/25, - (153 * \cos(17/1000) * \exp(-3/200))/80 - (6 * \exp(-3/200) * \sin(17/1000))/25, - (153 * \cos(51/2000) * \exp(-9/400))/80 - (6 * \exp(-9/400) * \sin(51/2000))/25, - (153 * \cos(17/500) * \exp(-3/100))/80 - (6 * \exp(-3/100) * \sin(17/500))/25, - (153 * \cos(17/400) * \exp(-3/80))/80 - (6 * \exp(-3/80) * \sin(17/400))/25, - (153 * \cos(51/1000) * \exp(-9/200))/80 - (6 * \exp(-9/200) * \sin(51/1000))/25, - (153 * \cos(119/2000) * \exp(-21/400))/80 - (6 * \exp(-21/400) * \sin(119/2000))/25, - (153 * \cos(17/250) * \exp(-3/50))/80 - (6 * \exp(-3/50) * \sin(17/250))/25, - (153 * \cos(153/2000) * \exp(-27/400))/80 - (6 * \exp(-27/400) * \sin(153/2000))/25, - (153 * \cos(17/200) * \exp(-3/40))/80 - (6 * \exp(-3/40) * \sin(17/200))/25, - (153 * \cos(187/2000) * \exp(-33/400))/80 - (6 * \exp(-33/400) * \sin(187/2000))/25, - (153 * \cos(51/500) * \exp(-9/100))/80 - (6 * \exp(-9/100) * \sin(51/500))/25, - (153 * \cos(221/2000) * \exp(-39/400))/80 - (6 * \exp(-39/400) * \sin(221/2000))/25, - (153 * \cos(119/1000) * \exp(-21/200))/80 - (6 * \exp(-21/200) * \sin(119/1000))/25, - (153 * \cos(17/250) * \exp(-3/50))/80 - (6 * \exp(-3/50) * \sin(17/250))/25, - (153 * \cos(17/1000) * \exp(-3/200))/80 - (6 * \exp(-3/200) * \sin(17/1000))/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(17/200) * \exp(-3/40))/80 - (6 * \exp(-3/40) * \sin(17/200))/25, - (153 * \cos(17/100) * \exp(-3/20))/80 - (6 * \exp(-3/20) * \sin(17/100))/25, - (153 * \cos(17/50) * \exp(-3/10))/80 - (6 * \exp(-3/10) * \sin(17/50))/25, - (153 * \cos(17/25) * \exp(-3/5))/80 - (6 * \exp(-3/5) * \sin(17/25))/25, - (153 * \cos(17/10) * \exp(-3/2))/80 - (6 * \exp(-3/2) * \sin(17/10))/25, - (153 * \cos(17/5) * \exp(-3/1))/80 - (6 * \exp(-3/1) * \sin(17/5))/25, - (153 * \cos(17/2) * \exp(-3/2))/80 - (6 * \exp(-3/2) * \sin(17/2))/25, - (153 * \cos(17/1) * \exp(-3/1))/80 - (6 * \exp(-3/1) * \sin(17/1))/25]$



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

$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 \cdot \sin(1921/2000))/25, - (153 \cdot \cos(969/1000) \cdot \exp(-171/200))/80 - (6 \cdot \exp(-171/200) \cdot \sin(969/1000))/25, - (153 \cdot \cos(391/400) \cdot \exp(-69/80))/80 - (6 \cdot \exp(-69/80) \cdot \sin(391/400))/25, - (153 \cdot \cos(493/500) \cdot \exp(-87/100))/80 - (6 \cdot \exp(-87/100) \cdot \sin(493/500))/25, - (153 \cdot \cos(1989/2000) \cdot \exp(-351/400))/80 - (6 \cdot \exp(-351/400) \cdot \sin(1989/2000))/25, - (153 \cdot \cos(1003/1000) \cdot \exp(-177/200))/80 - (6 \cdot \exp(-177/200) \cdot \sin(1003/1000))/25, - (153 \cdot \cos(2023/2000) \cdot \exp(-357/400))/80 - (6 \cdot \exp(-357/400) \cdot \sin(2023/2000))/25, - (153 \cdot \cos(51/50) \cdot \exp(-9/10))/80 - (6 \cdot \exp(-9/10) \cdot \sin(51/50))/25, - (153 \cdot \cos(2057/2000) \cdot \exp(-363/400))/80 - (6 \cdot \exp(-363/400) \cdot \sin(2057/2000))/25, - (153 \cdot \cos(1037/1000) \cdot \exp(-183/200))/80 - (6 \cdot \exp(-183/200) \cdot \sin(1037/1000))/25, - (153 \cdot \cos(2091/2000) \cdot \exp(-369/400))/80 - (6 \cdot \exp(-369/400) \cdot \sin(2091/2000))/25, - (153 \cdot \cos(527/500) \cdot \exp(-93/100))/80 - (6 \cdot \exp(-93/100) \cdot \sin(527/500))/25, - (153 \cdot \cos(17/16) \cdot \exp(-15/16))/80 - (6 \cdot \exp(-15/16) \cdot \sin(17/16))/25, - (153 \cdot \cos(1071/1000) \cdot \exp(-189/200))/80 - (6 \cdot \exp(-189/200) \cdot \sin(1071/1000))/25, - (153 \cdot \cos(2159/2000) \cdot \exp(-381/400))/80 - (6 \cdot \exp(-381/400) \cdot \sin(2159/2000))/25, - (153 \cdot \cos(136/125) \cdot \exp(-24/25))/80 - (6 \cdot \exp(-24/25) \cdot \sin(136/125))/25, - (153 \cdot \cos(2193/2000) \cdot \exp(-387/400))/80 - (6 \cdot \exp(-387/400) \cdot \sin(2193/2000))/25, - (153 \cdot \cos(221/200) \cdot \exp(-39/40))/80 - (6 \cdot \exp(-39/40) \cdot \sin(221/200))/25, - (153 \cdot \cos(2227/2000) \cdot \exp(-393/400))/80 - (6 \cdot \exp(-393/400) \cdot \sin(2227/2000))/25, - (153 \cdot \cos(561/500) \cdot \exp(-99/100))/80 - (6 \cdot \exp(-99/100) \cdot \sin(561/500))/25, - (153 \cdot \cos(2261/2000) \cdot \exp(-399/400))/80 - (6 \cdot \exp(-399/400) \cdot \sin(2261/2000))/25, - (153 \cdot \cos(1139/1000) \cdot \exp(-201/200))/80 - (6 \cdot \exp(-201/200) \cdot \sin(1139/1000))/25, - (153 \cdot \cos(459/400) \cdot \exp(-81/80))/80 - (6 \cdot \exp(-81/80) \cdot \sin(459/400))/25, - (153 \cdot \cos(289/250) \cdot \exp(-51/50))/80 - (6 \cdot \exp(-51/50) \cdot \sin(289/250))/25, - (153 \cdot \cos(2329/2000) \cdot \exp(-411/400))/80 - (6 \cdot \exp(-411/400) \cdot \sin(2329/2000))/25, - (153 \cdot \cos(1173/1000) \cdot \exp(-207/200))/80 - (6 \cdot \exp(-207/200) \cdot \sin(1173/1000))/25, - (153 \cdot \cos(2363/2000) \cdot \exp(-417/400))/80 - (6 \cdot \exp(-417/400) \cdot \sin(2363/2000))/25, - (153 \cdot \cos(119/100) \cdot \exp(-21/20))/80 - (6 \cdot \exp(-21/20) \cdot \sin(119/100))/25, - (153 \cdot \cos(2397/2000) \cdot \exp(-423/400))/80 - (6 \cdot \exp(-423/400) \cdot \sin(2397/2000))/25, - (153 \cdot \cos(1207/1000) \cdot \exp(-213/200))/80 - (6 \cdot \exp(-213/200) \cdot \sin(1207/1000))/25, - (153 \cdot \cos(2431/2000) \cdot \exp(-429/400))/80 - (6 \cdot \exp(-429/400) \cdot \sin(2431/2000))/25, - (153 \cdot \cos(153/125) \cdot \exp(-27/25))/80 - (6 \cdot \exp(-27/25) \cdot \sin(153/125))/25, - (153 \cdot \cos(493/400) \cdot \exp(-87/80))/80 - (6 \cdot \exp(-87/80) \cdot \sin(493/400))/25, - (153 \cdot \cos(1241/1000) \cdot \exp(-219/200))/80 - (6 \cdot \exp(-219/200) \cdot \sin(1241/1000))/25, - (153 \cdot \cos(2499/2000) \cdot \exp(-441/400))/80 - (6 \cdot \exp(-441/400) \cdot \sin(2499/2000))/25, - (153 \cdot \cos(629/500) \cdot \exp(-111/100))/80 - (6 \cdot \exp(-111/100) \cdot \sin(629/500))/25, - (153 \cdot \cos(2533/2000) \cdot \exp(-447/400))/80 - (6 \cdot \exp(-447/400) \cdot \sin(2533/2000))/25, - (153 \cdot \cos(51/40) \cdot \exp(-9/8))/80 - (6 \cdot \exp(-9/8) \cdot \sin(51/40))/25, - (153 \cdot \cos(2567/2000) \cdot \exp(-453/400))/80 - (6 \cdot \exp(-453/400) \cdot \sin(2567/2000))/25, - (153 \cdot \cos(323/250) \cdot \exp(-57/50))/80 - (6 \cdot \exp(-57/50) \cdot \sin(323/250))/25, - (153 \cdot \cos(2601/2000) \cdot \exp(-459/400))/80 - (6 \cdot \exp(-459/400) \cdot \sin(2601/2000))/25, - (153 \cdot \cos(1309/1000) \cdot \exp(-231/200))/80 - (6 \cdot \exp(-231/200) \cdot \sin(1309/1000))/25, - (153 \cdot \cos(527/400) \cdot \exp(-93/80))/80 - (6 \cdot \exp(-93/80) \cdot \sin(527/400))/25, - (153 \cdot \cos(663/500) \cdot \exp(-117/100))/80 - (6 \cdot \exp(-117/100) \cdot \sin(663/500))/25, - (153 \cdot \cos(2669/2000) \cdot \exp(-471/400))/80 - (6 \cdot \exp(-471/400) \cdot \sin(2669/2000))/25, - (153 \cdot \cos(1343/1000) \cdot \exp(-237/200))/80 - (6 \cdot \exp(-237/200) \cdot \sin(1343/1000))/25, - (153 \cdot \cos(2703/2000) \cdot \exp(-477/400))/80 - (6 \cdot \exp(-477/400) \cdot \sin(2703/2000))/25, - (153 \cdot \cos(34/25) \cdot \exp(-6/5))/80 - (6 \cdot \exp(-6/5) \cdot \sin(34/25))/25, - (153 \cdot \cos(2737/2000) \cdot \exp(-483/400))/80 - (6 \cdot \exp(-483/400) \cdot \sin(2737/2000))/25, -$

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

$(153 \cdot \cos(221/125) \cdot \exp(-39/25))/80 - (6 \cdot \exp(-39/25) \cdot \sin(221/125))/25, -$   
 $(153 \cdot \cos(3553/2000) \cdot \exp(-627/400))/80 - (6 \cdot \exp(-627/400) \cdot \sin(3553/2000))/25, -$   
 $(153 \cdot \cos(357/200) \cdot \exp(-63/40))/80 - (6 \cdot \exp(-63/40) \cdot \sin(357/200))/25, -$   
 $(153 \cdot \cos(3587/2000) \cdot \exp(-633/400))/80 - (6 \cdot \exp(-633/400) \cdot \sin(3587/2000))/25, -$   
 $(153 \cdot \cos(901/500) \cdot \exp(-159/100))/80 - (6 \cdot \exp(-159/100) \cdot \sin(901/500))/25, -$   
 $(153 \cdot \cos(3621/2000) \cdot \exp(-639/400))/80 - (6 \cdot \exp(-639/400) \cdot \sin(3621/2000))/25, -$   
 $(153 \cdot \cos(1819/1000) \cdot \exp(-321/200))/80 - (6 \cdot \exp(-321/200) \cdot \sin(1819/1000))/25, -$   
 $(153 \cdot \cos(731/400) \cdot \exp(-129/80))/80 - (6 \cdot \exp(-129/80) \cdot \sin(731/400))/25, -$   
 $(153 \cdot \cos(459/250) \cdot \exp(-81/50))/80 - (6 \cdot \exp(-81/50) \cdot \sin(459/250))/25, -$   
 $(153 \cdot \cos(3689/2000) \cdot \exp(-651/400))/80 - (6 \cdot \exp(-651/400) \cdot \sin(3689/2000))/25, -$   
 $(153 \cdot \cos(1853/1000) \cdot \exp(-327/200))/80 - (6 \cdot \exp(-327/200) \cdot \sin(1853/1000))/25, -$   
 $(153 \cdot \cos(3723/2000) \cdot \exp(-657/400))/80 - (6 \cdot \exp(-657/400) \cdot \sin(3723/2000))/25, -$   
 $(153 \cdot \cos(187/100) \cdot \exp(-33/20))/80 - (6 \cdot \exp(-33/20) \cdot \sin(187/100))/25, -$   
 $(153 \cdot \cos(3757/2000) \cdot \exp(-663/400))/80 - (6 \cdot \exp(-663/400) \cdot \sin(3757/2000))/25, -$   
 $(153 \cdot \cos(1887/1000) \cdot \exp(-333/200))/80 - (6 \cdot \exp(-333/200) \cdot \sin(1887/1000))/25, -$   
 $(153 \cdot \cos(3791/2000) \cdot \exp(-669/400))/80 - (6 \cdot \exp(-669/400) \cdot \sin(3791/2000))/25, -$   
 $(153 \cdot \cos(238/125) \cdot \exp(-42/25))/80 - (6 \cdot \exp(-42/25) \cdot \sin(238/125))/25, - (153 \cdot \cos(153/80) \cdot \exp(-$   
 $27/16))/80 - (6 \cdot \exp(-27/16) \cdot \sin(153/80))/25, - (153 \cdot \cos(1921/1000) \cdot \exp(-339/200))/80 - (6 \cdot \exp(-$   
 $339/200) \cdot \sin(1921/1000))/25, - (153 \cdot \cos(3859/2000) \cdot \exp(-681/400))/80 - (6 \cdot \exp(-$   
 $681/400) \cdot \sin(3859/2000))/25, - (153 \cdot \cos(969/500) \cdot \exp(-171/100))/80 - (6 \cdot \exp(-$   
 $171/100) \cdot \sin(969/500))/25, - (153 \cdot \cos(3893/2000) \cdot \exp(-687/400))/80 - (6 \cdot \exp(-$   
 $687/400) \cdot \sin(3893/2000))/25, - (153 \cdot \cos(391/200) \cdot \exp(-69/40))/80 - (6 \cdot \exp(-$   
 $69/40) \cdot \sin(391/200))/25, - (153 \cdot \cos(3927/2000) \cdot \exp(-693/400))/80 - (6 \cdot \exp(-$   
 $693/400) \cdot \sin(3927/2000))/25, - (153 \cdot \cos(493/250) \cdot \exp(-87/50))/80 - (6 \cdot \exp(-$   
 $87/50) \cdot \sin(493/250))/25, - (153 \cdot \cos(3961/2000) \cdot \exp(-699/400))/80 - (6 \cdot \exp(-$   
 $699/400) \cdot \sin(3961/2000))/25, - (153 \cdot \cos(1989/1000) \cdot \exp(-351/200))/80 - (6 \cdot \exp(-$   
 $351/200) \cdot \sin(1989/1000))/25, - (153 \cdot \cos(799/400) \cdot \exp(-141/80))/80 - (6 \cdot \exp(-$   
 $141/80) \cdot \sin(799/400))/25, - (153 \cdot \cos(1003/500) \cdot \exp(-177/100))/80 - (6 \cdot \exp(-$   
 $177/100) \cdot \sin(1003/500))/25, - (153 \cdot \cos(4029/2000) \cdot \exp(-711/400))/80 - (6 \cdot \exp(-$   
 $711/400) \cdot \sin(4029/2000))/25, - (153 \cdot \cos(2023/1000) \cdot \exp(-357/200))/80 - (6 \cdot \exp(-$   
 $357/200) \cdot \sin(2023/1000))/25, - (153 \cdot \cos(4063/2000) \cdot \exp(-717/400))/80 - (6 \cdot \exp(-$   
 $717/400) \cdot \sin(4063/2000))/25, - (153 \cdot \cos(51/25) \cdot \exp(-9/5))/80 - (6 \cdot \exp(-9/5) \cdot \sin(51/25))/25, -$   
 $(153 \cdot \cos(4097/2000) \cdot \exp(-723/400))/80 - (6 \cdot \exp(-723/400) \cdot \sin(4097/2000))/25, -$   
 $(153 \cdot \cos(2057/1000) \cdot \exp(-363/200))/80 - (6 \cdot \exp(-363/200) \cdot \sin(2057/1000))/25, -$   
 $(153 \cdot \cos(4131/2000) \cdot \exp(-729/400))/80 - (6 \cdot \exp(-729/400) \cdot \sin(4131/2000))/25, -$   
 $(153 \cdot \cos(1037/500) \cdot \exp(-183/100))/80 - (6 \cdot \exp(-183/100) \cdot \sin(1037/500))/25, -$   
 $(153 \cdot \cos(833/400) \cdot \exp(-147/80))/80 - (6 \cdot \exp(-147/80) \cdot \sin(833/400))/25, -$   
 $(153 \cdot \cos(2091/1000) \cdot \exp(-369/200))/80 - (6 \cdot \exp(-369/200) \cdot \sin(2091/1000))/25, -$   
 $(153 \cdot \cos(4199/2000) \cdot \exp(-741/400))/80 - (6 \cdot \exp(-741/400) \cdot \sin(4199/2000))/25, -$   
 $(153 \cdot \cos(527/250) \cdot \exp(-93/50))/80 - (6 \cdot \exp(-93/50) \cdot \sin(527/250))/25, -$   
 $(153 \cdot \cos(4233/2000) \cdot \exp(-747/400))/80 - (6 \cdot \exp(-747/400) \cdot \sin(4233/2000))/25, -$   
 $(153 \cdot \cos(17/8) \cdot \exp(-15/8))/80 - (6 \cdot \exp(-15/8) \cdot \sin(17/8))/25]$

>>

3)

y =

$$5 \sin(5x)^3$$

v =

$$(125 \pi^2) / 16$$

a =

77.1063

>>