

# INPUT IN THE EDITOR

## QUESTION 1

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

## QUESTION 2

```
commandwindow
clear
clc
close all
syms t
d = 1.5*exp(-0.75*t) * sin(0.85*t) + 0.375*t
tn = (0: 0.01: 2.5)
dn = subs(d, tn)
V = diff(d)
Vn = subs(V,tn)
figure (1)
plot(tn,Vn)
xlabel ('time t (mins)')
ylabel ('velocity (m/s)')
grid on
grid minor

A = diff(V)
An = subs(A,tn)
figure(2)
plot (tn,An)
xlabel ('time (mins)')
ylabel ('acceleration (m/s^2)')
grid on
grid minor

figure (3)
plot (tn,Vn,tn,An)
axis tight
xlabel ('time (mins)')
ylabel ('variable')
legend ('velocity (m/s)', 'acceleration (m/s^2)'), 'location', 'best'

A = diff(V)
An = subs(A,tn)
```

## QUESTION 3

```
commandwindow
clear
```

```
clc
close all
syms x
y = 5*(sin(5*x))^5
d = 3.142*y^2
T = int( d, 0, 180)
F = double(T)
```

## OUTPUT IN THE COMMAND WINDOW

### QUESTION 1

A =

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

F =

-1568

david =

-0.1786	-0.1020	0.5714	0.0153
0.0357	-0.0153	0.0357	-0.0102
0.1429	0.1173	0.3929	-0.0051
-0.0357	0.1582	0.9643	-0.0612

B =

-4
2
6
4

X =

4.0000
-0.0000
2.0000
6.0000

**QUESTION 2**

d =

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

tn =

Columns 1 through 11

	0	0.0100	0.0200	0.0300	0.0400	0.0500	0.0600
0.0700	0.0800	0.0900	0.1000				

Columns 12 through 22

	0.1100	0.1200	0.1300	0.1400	0.1500	0.1600	0.1700
0.1800	0.1900	0.2000	0.2100				

Columns 23 through 33

	0.2200	0.2300	0.2400	0.2500	0.2600	0.2700	0.2800
0.2900	0.3000	0.3100	0.3200				

Columns 34 through 44

	0.3300	0.3400	0.3500	0.3600	0.3700	0.3800	0.3900
0.4000	0.4100	0.4200	0.4300				

Columns 45 through 55

	0.4400	0.4500	0.4600	0.4700	0.4800	0.4900	0.5000
0.5100	0.5200	0.5300	0.5400				

Columns 56 through 66

	0.5500	0.5600	0.5700	0.5800	0.5900	0.6000	0.6100
0.6200	0.6300	0.6400	0.6500				

Columns 67 through 77

	0.6600	0.6700	0.6800	0.6900	0.7000	0.7100	0.7200
0.7300	0.7400	0.7500	0.7600				

Columns 78 through 88

	0.7700	0.7800	0.7900	0.8000	0.8100	0.8200	0.8300
0.8400	0.8500	0.8600	0.8700				

Columns 89 through 99

	0.8800	0.8900	0.9000	0.9100	0.9200	0.9300	0.9400
0.9500	0.9600	0.9700	0.9800				

Columns 100 through 110

0.9900 1.0000 1.0100 1.0200 1.0300 1.0400 1.0500  
1.0600 1.0700 1.0800 1.0900

Columns 111 through 121

1.1000 1.1100 1.1200 1.1300 1.1400 1.1500 1.1600  
1.1700 1.1800 1.1900 1.2000

Columns 122 through 132

1.2100 1.2200 1.2300 1.2400 1.2500 1.2600 1.2700  
1.2800 1.2900 1.3000 1.3100

Columns 133 through 143

1.3200 1.3300 1.3400 1.3500 1.3600 1.3700 1.3800  
1.3900 1.4000 1.4100 1.4200

Columns 144 through 154

1.4300 1.4400 1.4500 1.4600 1.4700 1.4800 1.4900  
1.5000 1.5100 1.5200 1.5300

Columns 155 through 165

1.5400 1.5500 1.5600 1.5700 1.5800 1.5900 1.6000  
1.6100 1.6200 1.6300 1.6400

Columns 166 through 176

1.6500 1.6600 1.6700 1.6800 1.6900 1.7000 1.7100  
1.7200 1.7300 1.7400 1.7500

Columns 177 through 187

1.7600 1.7700 1.7800 1.7900 1.8000 1.8100 1.8200  
1.8300 1.8400 1.8500 1.8600

Columns 188 through 198

1.8700 1.8800 1.8900 1.9000 1.9100 1.9200 1.9300  
1.9400 1.9500 1.9600 1.9700

Columns 199 through 209

1.9800 1.9900 2.0000 2.0100 2.0200 2.0300 2.0400  
2.0500 2.0600 2.0700 2.0800

Columns 210 through 220

2.0900 2.1000 2.1100 2.1200 2.1300 2.1400 2.1500  
2.1600 2.1700 2.1800 2.1900

Columns 221 through 231

2.2000 2.2100 2.2200 2.2300 2.2400 2.2500 2.2600  
2.2700 2.2800 2.2900 2.3000

Columns 232 through 242

2.3100 2.3200 2.3300 2.3400 2.3500 2.3600 2.3700  
2.3800 2.3900 2.4000 2.4100

Columns 243 through 251

2.4200 2.4300 2.4400 2.4500 2.4600 2.4700 2.4800  
2.4900 2.5000

dn =

[ 0, (3\*exp(-3/400)\*sin(17/2000))/2 + 3/800, (3\*exp(-3/200)\*sin(17/1000))/2 + 3/400, (3\*exp(-9/400)\*sin(51/2000))/2 + 9/800, (3\*exp(-3/100)\*sin(17/500))/2 + 3/200, (3\*exp(-3/80)\*sin(17/400))/2 + 3/160, (3\*exp(-9/200)\*sin(51/1000))/2 + 9/400, (3\*exp(-21/400)\*sin(119/2000))/2 + 21/800, (3\*exp(-3/50)\*sin(17/250))/2 + 3/100, (3\*exp(-27/400)\*sin(153/2000))/2 + 27/800, (3\*exp(-3/40)\*sin(17/200))/2 + 3/80, (3\*exp(-33/400)\*sin(187/2000))/2 + 33/800, (3\*exp(-9/100)\*sin(51/500))/2 + 9/200, (3\*exp(-39/400)\*sin(221/2000))/2 + 39/800, (3\*exp(-21/200)\*sin(119/1000))/2 + 21/400, (3\*exp(-9/80)\*sin(51/400))/2 + 9/160, (3\*exp(-3/25)\*sin(17/125))/2 + 3/50, (3\*exp(-51/400)\*sin(289/2000))/2 + 51/800, (3\*exp(-27/200)\*sin(153/1000))/2 + 27/400, (3\*exp(-57/400)\*sin(323/2000))/2 + 57/800, (3\*exp(-3/20)\*sin(17/100))/2 + 3/40, (3\*exp(-63/400)\*sin(357/2000))/2 + 63/800, (3\*exp(-33/200)\*sin(187/1000))/2 + 33/400, (3\*exp(-69/400)\*sin(391/2000))/2 + 69/800, (3\*exp(-9/50)\*sin(51/250))/2 + 9/100, (3\*exp(-3/16)\*sin(17/80))/2 + 3/32, (3\*exp(-39/200)\*sin(221/1000))/2 + 39/400, (3\*exp(-81/400)\*sin(459/2000))/2 + 81/800, (3\*exp(-21/100)\*sin(119/500))/2 + 21/200, (3\*exp(-87/400)\*sin(493/2000))/2 + 87/800, (3\*exp(-9/40)\*sin(51/200))/2 + 9/80, (3\*exp(-93/400)\*sin(527/2000))/2 + 93/800, (3\*exp(-6/25)\*sin(34/125))/2 + 3/25, (3\*exp(-99/400)\*sin(561/2000))/2 + 99/800, (3\*exp(-51/200)\*sin(289/1000))/2 + 51/400, (3\*exp(-21/80)\*sin(119/400))/2 + 21/160, (3\*exp(-27/100)\*sin(153/500))/2 + 27/200, (3\*exp(-111/400)\*sin(629/2000))/2 + 111/800, (3\*exp(-57/200)\*sin(323/1000))/2 + 57/400, (3\*exp(-117/400)\*sin(663/2000))/2 + 117/800, (3\*exp(-3/10)\*sin(17/50))/2 + 3/20, (3\*exp(-123/400)\*sin(697/2000))/2 + 123/800, (3\*exp(-63/200)\*sin(357/1000))/2 + 63/400, (3\*exp(-129/400)\*sin(731/2000))/2 + 129/800, (3\*exp(-33/100)\*sin(187/500))/2 + 33/200, (3\*exp(-27/80)\*sin(153/400))/2 + 27/160, (3\*exp(-69/200)\*sin(391/1000))/2 + 69/400, (3\*exp(-141/400)\*sin(799/2000))/2 + 141/800, (3\*exp(-9/25)\*sin(51/125))/2 + 9/50, (3\*exp(-147/400)\*sin(833/2000))/2 + 147/800, (3\*exp(-3/8)\*sin(17/40))/2 + 3/16, (3\*exp(-153/400)\*sin(867/2000))/2 + 153/800, (3\*exp(-39/100)\*sin(221/500))/2 + 39/200, (3\*exp(-159/400)\*sin(901/2000))/2 + 159/800, (3\*exp(-81/200)\*sin(459/1000))/2 + 81/400, (3\*exp(-33/80)\*sin(187/400))/2 + 33/160, (3\*exp(-21/50)\*sin(119/250))/2 + 21/100, (3\*exp(-171/400)\*sin(969/2000))/2 + 171/800, (3\*exp(-87/200)\*sin(493/1000))/2 + 87/400, (3\*exp(-177/400)\*sin(1003/2000))/2 + 177/800, (3\*exp(-9/20)\*sin(51/100))/2 + 9/40, (3\*exp(-183/400)\*sin(1037/2000))/2 + 183/800, (3\*exp(-93/200)\*sin(527/1000))/2 + 93/400, (3\*exp(-189/400)\*sin(1071/2000))/2 + 189/800, (3\*exp(-12/25)\*sin(68/125))/2 + 6/25, (3\*exp(-39/80)\*sin(221/400))/2 + 39/160, (3\*exp(-99/200)\*sin(561/1000))/2 + 99/400, (3\*exp(-201/400)\*sin(1139/2000))/2 + 201/800, (3\*exp(-51/100)\*sin(289/500))/2 + 51/200, (3\*exp(-207/400)\*sin(1173/2000))/2 + 207/800, (3\*exp(-21/40)\*sin(119/200))/2 + 21/80, (3\*exp(-213/400)\*sin(1207/2000))/2 + 213/800, (3\*exp(-27/50)\*sin(153/250))/2 + 27/100, (3\*exp(-219/400)\*sin(1241/2000))/2 +

219/800, (3\*exp(-111/200)\*sin(629/1000))/2 + 111/400, (3\*exp(-9/16)\*sin(51/80))/2 + 9/32, (3\*exp(-57/100)\*sin(323/500))/2 + 57/200, (3\*exp(-231/400)\*sin(1309/2000))/2 + 231/800, (3\*exp(-117/200)\*sin(663/1000))/2 + 117/400, (3\*exp(-237/400)\*sin(1343/2000))/2 + 237/800, (3\*exp(-3/5)\*sin(17/25))/2 + 3/10, (3\*exp(-243/400)\*sin(1377/2000))/2 + 243/800, (3\*exp(-123/200)\*sin(697/1000))/2 + 123/400, (3\*exp(-249/400)\*sin(1411/2000))/2 + 249/800, (3\*exp(-63/100)\*sin(357/500))/2 + 63/200, (3\*exp(-51/80)\*sin(289/400))/2 + 51/160, (3\*exp(-129/200)\*sin(731/1000))/2 + 129/400, (3\*exp(-261/400)\*sin(1479/2000))/2 + 261/800, (3\*exp(-33/50)\*sin(187/250))/2 + 33/100, (3\*exp(-267/400)\*sin(1513/2000))/2 + 267/800, (3\*exp(-27/40)\*sin(153/200))/2 + 27/80, (3\*exp(-273/400)\*sin(1547/2000))/2 + 273/800, (3\*exp(-69/100)\*sin(391/500))/2 + 69/200, (3\*exp(-279/400)\*sin(1581/2000))/2 + 279/800, (3\*exp(-141/200)\*sin(799/1000))/2 + 141/400, (3\*exp(-57/80)\*sin(323/400))/2 + 57/160, (3\*exp(-18/25)\*sin(102/125))/2 + 9/25, (3\*exp(-291/400)\*sin(1649/2000))/2 + 291/800, (3\*exp(-147/200)\*sin(833/1000))/2 + 147/400, (3\*exp(-297/400)\*sin(1683/2000))/2 + 297/800, (3\*exp(-3/4)\*sin(17/20))/2 + 3/8, (3\*exp(-303/400)\*sin(1717/2000))/2 + 303/800, (3\*exp(-153/200)\*sin(867/1000))/2 + 153/400, (3\*exp(-309/400)\*sin(1751/2000))/2 + 309/800, (3\*exp(-39/50)\*sin(221/250))/2 + 39/100, (3\*exp(-63/80)\*sin(357/400))/2 + 63/160, (3\*exp(-159/200)\*sin(901/1000))/2 + 159/400, (3\*exp(-321/400)\*sin(1819/2000))/2 + 321/800, (3\*exp(-81/100)\*sin(459/500))/2 + 81/200, (3\*exp(-327/400)\*sin(1853/2000))/2 + 327/800, (3\*exp(-33/40)\*sin(187/200))/2 + 33/80, (3\*exp(-333/400)\*sin(1887/2000))/2 + 333/800, (3\*exp(-21/25)\*sin(119/125))/2 + 21/50, (3\*exp(-339/400)\*sin(1921/2000))/2 + 339/800, (3\*exp(-171/200)\*sin(969/1000))/2 + 171/400, (3\*exp(-69/80)\*sin(391/400))/2 + 69/160, (3\*exp(-87/100)\*sin(493/500))/2 + 87/200, (3\*exp(-351/400)\*sin(1989/2000))/2 + 351/800, (3\*exp(-177/200)\*sin(1003/1000))/2 + 177/400, (3\*exp(-357/400)\*sin(2023/2000))/2 + 357/800, (3\*exp(-9/10)\*sin(51/50))/2 + 9/20, (3\*exp(-363/400)\*sin(2057/2000))/2 + 363/800, (3\*exp(-183/200)\*sin(1037/1000))/2 + 183/400, (3\*exp(-369/400)\*sin(2091/2000))/2 + 369/800, (3\*exp(-93/100)\*sin(527/500))/2 + 93/200, (3\*exp(-15/16)\*sin(17/16))/2 + 15/32, (3\*exp(-189/200)\*sin(1071/1000))/2 + 189/400, (3\*exp(-381/400)\*sin(2159/2000))/2 + 381/800, (3\*exp(-24/25)\*sin(136/125))/2 + 12/25, (3\*exp(-387/400)\*sin(2193/2000))/2 + 387/800, (3\*exp(-39/40)\*sin(221/200))/2 + 39/80, (3\*exp(-393/400)\*sin(2227/2000))/2 + 393/800, (3\*exp(-99/100)\*sin(561/500))/2 + 99/200, (3\*exp(-399/400)\*sin(2261/2000))/2 + 399/800, (3\*exp(-201/200)\*sin(1139/1000))/2 + 201/400, (3\*exp(-81/80)\*sin(459/400))/2 + 81/160, (3\*exp(-51/50)\*sin(289/250))/2 + 51/100, (3\*exp(-411/400)\*sin(2329/2000))/2 + 411/800, (3\*exp(-207/200)\*sin(1173/1000))/2 + 207/400, (3\*exp(-417/400)\*sin(2363/2000))/2 + 417/800, (3\*exp(-21/20)\*sin(119/100))/2 + 21/40, (3\*exp(-423/400)\*sin(2397/2000))/2 + 423/800, (3\*exp(-213/200)\*sin(1207/1000))/2 + 213/400, (3\*exp(-429/400)\*sin(2431/2000))/2 + 429/800, (3\*exp(-27/25)\*sin(153/125))/2 + 27/50, (3\*exp(-87/80)\*sin(493/400))/2 + 87/160, (3\*exp(-219/200)\*sin(1241/1000))/2 + 219/400, (3\*exp(-441/400)\*sin(2499/2000))/2 + 441/800, (3\*exp(-111/100)\*sin(629/500))/2 + 111/200, (3\*exp(-447/400)\*sin(2533/2000))/2 + 447/800, (3\*exp(-9/8)\*sin(51/40))/2 + 9/16, (3\*exp(-453/400)\*sin(2567/2000))/2 + 453/800, (3\*exp(-57/50)\*sin(323/250))/2 + 57/100, (3\*exp(-459/400)\*sin(2601/2000))/2 + 459/800, (3\*exp(-231/200)\*sin(1309/1000))/2 + 231/400, (3\*exp(-93/80)\*sin(527/400))/2 + 93/160, (3\*exp(-117/100)\*sin(663/500))/2 + 117/200, (3\*exp(-471/400)\*sin(2669/2000))/2 + 471/800, (3\*exp(-237/200)\*sin(1343/1000))/2 + 237/400, (3\*exp(-477/400)\*sin(2703/2000))/2 + 477/800, (3\*exp(-6/5)\*sin(34/25))/2 + 3/5, (3\*exp(-483/400)\*sin(2737/2000))/2 + 483/800, (3\*exp(-243/200)\*sin(1377/1000))/2 + 243/400, (3\*exp(-

489/400)\*sin(2771/2000))/2 + 489/800, (3\*exp(-123/100)\*sin(697/500))/2 +  
123/200, (3\*exp(-99/80)\*sin(561/400))/2 + 99/160, (3\*exp(-  
249/200)\*sin(1411/1000))/2 + 249/400, (3\*exp(-501/400)\*sin(2839/2000))/2 +  
501/800, (3\*exp(-63/50)\*sin(357/250))/2 + 63/100, (3\*exp(-  
507/400)\*sin(2873/2000))/2 + 507/800, (3\*exp(-51/40)\*sin(289/200))/2 + 51/80,  
(3\*exp(-513/400)\*sin(2907/2000))/2 + 513/800, (3\*exp(-  
129/100)\*sin(731/500))/2 + 129/200, (3\*exp(-519/400)\*sin(2941/2000))/2 +  
519/800, (3\*exp(-261/200)\*sin(1479/1000))/2 + 261/400, (3\*exp(-  
21/16)\*sin(119/80))/2 + 21/32, (3\*exp(-33/25)\*sin(187/125))/2 + 33/50,  
(3\*exp(-531/400)\*sin(3009/2000))/2 + 531/800, (3\*exp(-  
267/200)\*sin(1513/1000))/2 + 267/400, (3\*exp(-537/400)\*sin(3043/2000))/2 +  
537/800, (3\*exp(-27/20)\*sin(153/100))/2 + 27/40, (3\*exp(-  
543/400)\*sin(3077/2000))/2 + 543/800, (3\*exp(-273/200)\*sin(1547/1000))/2 +  
273/400, (3\*exp(-549/400)\*sin(3111/2000))/2 + 549/800, (3\*exp(-  
69/50)\*sin(391/250))/2 + 69/100, (3\*exp(-111/80)\*sin(629/400))/2 + 111/160,  
(3\*exp(-279/200)\*sin(1581/1000))/2 + 279/400, (3\*exp(-  
561/400)\*sin(3179/2000))/2 + 561/800, (3\*exp(-141/100)\*sin(799/500))/2 +  
141/200, (3\*exp(-567/400)\*sin(3213/2000))/2 + 567/800, (3\*exp(-  
57/40)\*sin(323/200))/2 + 57/80, (3\*exp(-573/400)\*sin(3247/2000))/2 + 573/800,  
(3\*exp(-36/25)\*sin(204/125))/2 + 18/25, (3\*exp(-579/400)\*sin(3281/2000))/2 +  
579/800, (3\*exp(-291/200)\*sin(1649/1000))/2 + 291/400, (3\*exp(-  
117/80)\*sin(663/400))/2 + 117/160, (3\*exp(-147/100)\*sin(833/500))/2 +  
147/200, (3\*exp(-591/400)\*sin(3349/2000))/2 + 591/800, (3\*exp(-  
297/200)\*sin(1683/1000))/2 + 297/400, (3\*exp(-597/400)\*sin(3383/2000))/2 +  
597/800, (3\*exp(-3/2)\*sin(17/10))/2 + 3/4, (3\*exp(-603/400)\*sin(3417/2000))/2 +  
603/800, (3\*exp(-303/200)\*sin(1717/1000))/2 + 303/400, (3\*exp(-  
609/400)\*sin(3451/2000))/2 + 609/800, (3\*exp(-153/100)\*sin(867/500))/2 +  
153/200, (3\*exp(-123/80)\*sin(697/400))/2 + 123/160, (3\*exp(-  
309/200)\*sin(1751/1000))/2 + 309/400, (3\*exp(-621/400)\*sin(3519/2000))/2 +  
621/800, (3\*exp(-39/25)\*sin(221/125))/2 + 39/50, (3\*exp(-  
627/400)\*sin(3553/2000))/2 + 627/800, (3\*exp(-63/40)\*sin(357/200))/2 + 63/80,  
(3\*exp(-633/400)\*sin(3587/2000))/2 + 633/800, (3\*exp(-  
159/100)\*sin(901/500))/2 + 159/200, (3\*exp(-639/400)\*sin(3621/2000))/2 +  
639/800, (3\*exp(-321/200)\*sin(1819/1000))/2 + 321/400, (3\*exp(-  
129/80)\*sin(731/400))/2 + 129/160, (3\*exp(-81/50)\*sin(459/250))/2 + 81/100,  
(3\*exp(-651/400)\*sin(3689/2000))/2 + 651/800, (3\*exp(-  
327/200)\*sin(1853/1000))/2 + 327/400, (3\*exp(-657/400)\*sin(3723/2000))/2 +  
657/800, (3\*exp(-33/20)\*sin(187/100))/2 + 33/40, (3\*exp(-  
663/400)\*sin(3757/2000))/2 + 663/800, (3\*exp(-333/200)\*sin(1887/1000))/2 +  
333/400, (3\*exp(-669/400)\*sin(3791/2000))/2 + 669/800, (3\*exp(-  
42/25)\*sin(238/125))/2 + 21/25, (3\*exp(-27/16)\*sin(153/80))/2 + 27/32,  
(3\*exp(-339/200)\*sin(1921/1000))/2 + 339/400, (3\*exp(-  
681/400)\*sin(3859/2000))/2 + 681/800, (3\*exp(-171/100)\*sin(969/500))/2 +  
171/200, (3\*exp(-687/400)\*sin(3893/2000))/2 + 687/800, (3\*exp(-  
69/40)\*sin(391/200))/2 + 69/80, (3\*exp(-693/400)\*sin(3927/2000))/2 + 693/800,  
(3\*exp(-87/50)\*sin(493/250))/2 + 87/100, (3\*exp(-699/400)\*sin(3961/2000))/2 +  
699/800, (3\*exp(-351/200)\*sin(1989/1000))/2 + 351/400, (3\*exp(-  
141/80)\*sin(799/400))/2 + 141/160, (3\*exp(-177/100)\*sin(1003/500))/2 +  
177/200, (3\*exp(-711/400)\*sin(4029/2000))/2 + 711/800, (3\*exp(-  
357/200)\*sin(2023/1000))/2 + 357/400, (3\*exp(-717/400)\*sin(4063/2000))/2 +  
717/800, (3\*exp(-9/5)\*sin(51/25))/2 + 9/10, (3\*exp(-  
723/400)\*sin(4097/2000))/2 + 723/800, (3\*exp(-363/200)\*sin(2057/1000))/2 +  
363/400, (3\*exp(-729/400)\*sin(4131/2000))/2 + 729/800, (3\*exp(-  
183/100)\*sin(1037/500))/2 + 183/200, (3\*exp(-147/80)\*sin(833/400))/2 +  
147/160, (3\*exp(-369/200)\*sin(2091/1000))/2 + 369/400, (3\*exp(-  
741/400)\*sin(4199/2000))/2 + 741/800, (3\*exp(-93/50)\*sin(527/250))/2 +

$$93/100, (3*\exp(-747/400)*\sin(4233/2000))/2 + 747/800, (3*\exp(-15/8)*\sin(17/8))/2 + 15/16]$$

V =

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

Vn =

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



$(51 \cdot \cos(391/1000) \cdot \exp(-69/200))/40 - (9 \cdot \exp(-69/200) \cdot \sin(391/1000))/8 + 3/8,$   
 $(51 \cdot \cos(799/2000) \cdot \exp(-141/400))/40 - (9 \cdot \exp(-141/400) \cdot \sin(799/2000))/8 +$   
 $3/8, (51 \cdot \cos(51/125) \cdot \exp(-9/25))/40 - (9 \cdot \exp(-9/25) \cdot \sin(51/125))/8 + 3/8,$   
 $(51 \cdot \cos(833/2000) \cdot \exp(-147/400))/40 - (9 \cdot \exp(-147/400) \cdot \sin(833/2000))/8 +$   
 $3/8, (51 \cdot \cos(17/40) \cdot \exp(-3/8))/40 - (9 \cdot \exp(-3/8) \cdot \sin(17/40))/8 + 3/8,$   
 $(51 \cdot \cos(867/2000) \cdot \exp(-153/400))/40 - (9 \cdot \exp(-153/400) \cdot \sin(867/2000))/8 +$   
 $3/8, (51 \cdot \cos(221/500) \cdot \exp(-39/100))/40 - (9 \cdot \exp(-39/100) \cdot \sin(221/500))/8 +$   
 $3/8, (51 \cdot \cos(901/2000) \cdot \exp(-159/400))/40 - (9 \cdot \exp(-159/400) \cdot \sin(901/2000))/8$   
 $+ 3/8, (51 \cdot \cos(459/1000) \cdot \exp(-81/200))/40 - (9 \cdot \exp(-81/200) \cdot \sin(459/1000))/8$   
 $+ 3/8, (51 \cdot \cos(187/400) \cdot \exp(-33/80))/40 - (9 \cdot \exp(-33/80) \cdot \sin(187/400))/8 +$   
 $3/8, (51 \cdot \cos(119/250) \cdot \exp(-21/50))/40 - (9 \cdot \exp(-21/50) \cdot \sin(119/250))/8 + 3/8,$   
 $(51 \cdot \cos(969/2000) \cdot \exp(-171/400))/40 - (9 \cdot \exp(-171/400) \cdot \sin(969/2000))/8 +$   
 $3/8, (51 \cdot \cos(493/1000) \cdot \exp(-87/200))/40 - (9 \cdot \exp(-87/200) \cdot \sin(493/1000))/8 +$   
 $3/8, (51 \cdot \cos(1003/2000) \cdot \exp(-177/400))/40 - (9 \cdot \exp(-$   
 $177/400) \cdot \sin(1003/2000))/8 + 3/8, (51 \cdot \cos(51/100) \cdot \exp(-9/20))/40 - (9 \cdot \exp(-$   
 $9/20) \cdot \sin(51/100))/8 + 3/8, (51 \cdot \cos(1037/2000) \cdot \exp(-183/400))/40 - (9 \cdot \exp(-$   
 $183/400) \cdot \sin(1037/2000))/8 + 3/8, (51 \cdot \cos(527/1000) \cdot \exp(-93/200))/40 -$   
 $(9 \cdot \exp(-93/200) \cdot \sin(527/1000))/8 + 3/8, (51 \cdot \cos(1071/2000) \cdot \exp(-189/400))/40$   
 $- (9 \cdot \exp(-189/400) \cdot \sin(1071/2000))/8 + 3/8, (51 \cdot \cos(68/125) \cdot \exp(-12/25))/40 -$   
 $(9 \cdot \exp(-12/25) \cdot \sin(68/125))/8 + 3/8, (51 \cdot \cos(221/400) \cdot \exp(-39/80))/40 -$   
 $(9 \cdot \exp(-39/80) \cdot \sin(221/400))/8 + 3/8, (51 \cdot \cos(561/1000) \cdot \exp(-99/200))/40 -$   
 $(9 \cdot \exp(-99/200) \cdot \sin(561/1000))/8 + 3/8, (51 \cdot \cos(1139/2000) \cdot \exp(-201/400))/40$   
 $- (9 \cdot \exp(-201/400) \cdot \sin(1139/2000))/8 + 3/8, (51 \cdot \cos(289/500) \cdot \exp(-51/100))/40$   
 $- (9 \cdot \exp(-51/100) \cdot \sin(289/500))/8 + 3/8, (51 \cdot \cos(1173/2000) \cdot \exp(-207/400))/40$   
 $- (9 \cdot \exp(-207/400) \cdot \sin(1173/2000))/8 + 3/8, (51 \cdot \cos(119/200) \cdot \exp(-21/40))/40$   
 $- (9 \cdot \exp(-21/40) \cdot \sin(119/200))/8 + 3/8, (51 \cdot \cos(1207/2000) \cdot \exp(-213/400))/40$   
 $- (9 \cdot \exp(-213/400) \cdot \sin(1207/2000))/8 + 3/8, (51 \cdot \cos(153/250) \cdot \exp(-27/50))/40$   
 $- (9 \cdot \exp(-27/50) \cdot \sin(153/250))/8 + 3/8, (51 \cdot \cos(1241/2000) \cdot \exp(-219/400))/40$   
 $- (9 \cdot \exp(-219/400) \cdot \sin(1241/2000))/8 + 3/8, (51 \cdot \cos(629/1000) \cdot \exp(-$   
 $111/200))/40 - (9 \cdot \exp(-111/200) \cdot \sin(629/1000))/8 + 3/8, (51 \cdot \cos(51/80) \cdot \exp(-$   
 $9/16))/40 - (9 \cdot \exp(-9/16) \cdot \sin(51/80))/8 + 3/8, (51 \cdot \cos(323/500) \cdot \exp(-$   
 $57/100))/40 - (9 \cdot \exp(-57/100) \cdot \sin(323/500))/8 + 3/8, (51 \cdot \cos(1309/2000) \cdot \exp(-$   
 $231/400))/40 - (9 \cdot \exp(-231/400) \cdot \sin(1309/2000))/8 + 3/8,$   
 $(51 \cdot \cos(663/1000) \cdot \exp(-117/200))/40 - (9 \cdot \exp(-117/200) \cdot \sin(663/1000))/8 +$   
 $3/8, (51 \cdot \cos(1343/2000) \cdot \exp(-237/400))/40 - (9 \cdot \exp(-$   
 $237/400) \cdot \sin(1343/2000))/8 + 3/8, (51 \cdot \cos(17/25) \cdot \exp(-3/5))/40 - (9 \cdot \exp(-$   
 $3/5) \cdot \sin(17/25))/8 + 3/8, (51 \cdot \cos(1377/2000) \cdot \exp(-243/400))/40 - (9 \cdot \exp(-$   
 $243/400) \cdot \sin(1377/2000))/8 + 3/8, (51 \cdot \cos(697/1000) \cdot \exp(-123/200))/40 -$   
 $(9 \cdot \exp(-123/200) \cdot \sin(697/1000))/8 + 3/8, (51 \cdot \cos(1411/2000) \cdot \exp(-249/400))/40$   
 $- (9 \cdot \exp(-249/400) \cdot \sin(1411/2000))/8 + 3/8, (51 \cdot \cos(357/500) \cdot \exp(-63/100))/40$   
 $- (9 \cdot \exp(-63/100) \cdot \sin(357/500))/8 + 3/8, (51 \cdot \cos(289/400) \cdot \exp(-51/80))/40 -$   
 $(9 \cdot \exp(-51/80) \cdot \sin(289/400))/8 + 3/8, (51 \cdot \cos(731/1000) \cdot \exp(-129/200))/40 -$   
 $(9 \cdot \exp(-129/200) \cdot \sin(731/1000))/8 + 3/8, (51 \cdot \cos(1479/2000) \cdot \exp(-261/400))/40$   
 $- (9 \cdot \exp(-261/400) \cdot \sin(1479/2000))/8 + 3/8, (51 \cdot \cos(187/250) \cdot \exp(-33/50))/40$   
 $- (9 \cdot \exp(-33/50) \cdot \sin(187/250))/8 + 3/8, (51 \cdot \cos(1513/2000) \cdot \exp(-267/400))/40$   
 $- (9 \cdot \exp(-267/400) \cdot \sin(1513/2000))/8 + 3/8, (51 \cdot \cos(153/200) \cdot \exp(-27/40))/40$   
 $- (9 \cdot \exp(-27/40) \cdot \sin(153/200))/8 + 3/8, (51 \cdot \cos(1547/2000) \cdot \exp(-273/400))/40$   
 $- (9 \cdot \exp(-273/400) \cdot \sin(1547/2000))/8 + 3/8, (51 \cdot \cos(391/500) \cdot \exp(-69/100))/40$   
 $- (9 \cdot \exp(-69/100) \cdot \sin(391/500))/8 + 3/8, (51 \cdot \cos(1581/2000) \cdot \exp(-279/400))/40$   
 $- (9 \cdot \exp(-279/400) \cdot \sin(1581/2000))/8 + 3/8, (51 \cdot \cos(799/1000) \cdot \exp(-$   
 $141/200))/40 - (9 \cdot \exp(-141/200) \cdot \sin(799/1000))/8 + 3/8,$   
 $(51 \cdot \cos(323/400) \cdot \exp(-57/80))/40 - (9 \cdot \exp(-57/80) \cdot \sin(323/400))/8 + 3/8,$   
 $(51 \cdot \cos(102/125) \cdot \exp(-18/25))/40 - (9 \cdot \exp(-18/25) \cdot \sin(102/125))/8 + 3/8,$   
 $(51 \cdot \cos(1649/2000) \cdot \exp(-291/400))/40 - (9 \cdot \exp(-291/400) \cdot \sin(1649/2000))/8 +$   
 $3/8, (51 \cdot \cos(833/1000) \cdot \exp(-147/200))/40 - (9 \cdot \exp(-147/200) \cdot \sin(833/1000))/8$   
 $+ 3/8, (51 \cdot \cos(1683/2000) \cdot \exp(-297/400))/40 - (9 \cdot \exp(-$   
 $297/400) \cdot \sin(1683/2000))/8 + 3/8, (51 \cdot \cos(17/20) \cdot \exp(-3/4))/40 - (9 \cdot \exp(-$

$3/4) * \sin(17/20)) / 8 + 3/8, (51 * \cos(1717/2000) * \exp(-303/400)) / 40 - (9 * \exp(-303/400) * \sin(1717/2000)) / 8 + 3/8, (51 * \cos(867/1000) * \exp(-153/200)) / 40 - (9 * \exp(-153/200) * \sin(867/1000)) / 8 + 3/8, (51 * \cos(1751/2000) * \exp(-309/400)) / 40 - (9 * \exp(-309/400) * \sin(1751/2000)) / 8 + 3/8, (51 * \cos(221/250) * \exp(-39/50)) / 40 - (9 * \exp(-39/50) * \sin(221/250)) / 8 + 3/8, (51 * \cos(357/400) * \exp(-63/80)) / 40 - (9 * \exp(-63/80) * \sin(357/400)) / 8 + 3/8, (51 * \cos(901/1000) * \exp(-159/200)) / 40 - (9 * \exp(-159/200) * \sin(901/1000)) / 8 + 3/8, (51 * \cos(1819/2000) * \exp(-321/400)) / 40 - (9 * \exp(-321/400) * \sin(1819/2000)) / 8 + 3/8, (51 * \cos(459/500) * \exp(-81/100)) / 40 - (9 * \exp(-81/100) * \sin(459/500)) / 8 + 3/8, (51 * \cos(1853/2000) * \exp(-327/400)) / 40 - (9 * \exp(-327/400) * \sin(1853/2000)) / 8 + 3/8, (51 * \cos(187/200) * \exp(-33/40)) / 40 - (9 * \exp(-33/40) * \sin(187/200)) / 8 + 3/8, (51 * \cos(1887/2000) * \exp(-333/400)) / 40 - (9 * \exp(-333/400) * \sin(1887/2000)) / 8 + 3/8, (51 * \cos(119/125) * \exp(-21/25)) / 40 - (9 * \exp(-21/25) * \sin(119/125)) / 8 + 3/8, (51 * \cos(1921/2000) * \exp(-339/400)) / 40 - (9 * \exp(-339/400) * \sin(1921/2000)) / 8 + 3/8, (51 * \cos(969/1000) * \exp(-171/200)) / 40 - (9 * \exp(-171/200) * \sin(969/1000)) / 8 + 3/8, (51 * \cos(391/400) * \exp(-69/80)) / 40 - (9 * \exp(-69/80) * \sin(391/400)) / 8 + 3/8, (51 * \cos(493/500) * \exp(-87/100)) / 40 - (9 * \exp(-87/100) * \sin(493/500)) / 8 + 3/8, (51 * \cos(1989/2000) * \exp(-351/400)) / 40 - (9 * \exp(-351/400) * \sin(1989/2000)) / 8 + 3/8, (51 * \cos(1003/1000) * \exp(-177/200)) / 40 - (9 * \exp(-177/200) * \sin(1003/1000)) / 8 + 3/8, (51 * \cos(2023/2000) * \exp(-357/400)) / 40 - (9 * \exp(-357/400) * \sin(2023/2000)) / 8 + 3/8, (51 * \cos(51/50) * \exp(-9/10)) / 40 - (9 * \exp(-9/10) * \sin(51/50)) / 8 + 3/8, (51 * \cos(2057/2000) * \exp(-363/400)) / 40 - (9 * \exp(-363/400) * \sin(2057/2000)) / 8 + 3/8, (51 * \cos(1037/1000) * \exp(-183/200)) / 40 - (9 * \exp(-183/200) * \sin(1037/1000)) / 8 + 3/8, (51 * \cos(2091/2000) * \exp(-369/400)) / 40 - (9 * \exp(-369/400) * \sin(2091/2000)) / 8 + 3/8, (51 * \cos(527/500) * \exp(-93/100)) / 40 - (9 * \exp(-93/100) * \sin(527/500)) / 8 + 3/8, (51 * \cos(17/16) * \exp(-15/16)) / 40 - (9 * \exp(-15/16) * \sin(17/16)) / 8 + 3/8, (51 * \cos(1071/1000) * \exp(-189/200)) / 40 - (9 * \exp(-189/200) * \sin(1071/1000)) / 8 + 3/8, (51 * \cos(2159/2000) * \exp(-381/400)) / 40 - (9 * \exp(-381/400) * \sin(2159/2000)) / 8 + 3/8, (51 * \cos(136/125) * \exp(-24/25)) / 40 - (9 * \exp(-24/25) * \sin(136/125)) / 8 + 3/8, (51 * \cos(2193/2000) * \exp(-387/400)) / 40 - (9 * \exp(-387/400) * \sin(2193/2000)) / 8 + 3/8, (51 * \cos(221/200) * \exp(-39/40)) / 40 - (9 * \exp(-39/40) * \sin(221/200)) / 8 + 3/8, (51 * \cos(2227/2000) * \exp(-393/400)) / 40 - (9 * \exp(-393/400) * \sin(2227/2000)) / 8 + 3/8, (51 * \cos(561/500) * \exp(-99/100)) / 40 - (9 * \exp(-99/100) * \sin(561/500)) / 8 + 3/8, (51 * \cos(2261/2000) * \exp(-399/400)) / 40 - (9 * \exp(-399/400) * \sin(2261/2000)) / 8 + 3/8, (51 * \cos(1139/1000) * \exp(-201/200)) / 40 - (9 * \exp(-201/200) * \sin(1139/1000)) / 8 + 3/8, (51 * \cos(459/400) * \exp(-81/80)) / 40 - (9 * \exp(-81/80) * \sin(459/400)) / 8 + 3/8, (51 * \cos(289/250) * \exp(-51/50)) / 40 - (9 * \exp(-51/50) * \sin(289/250)) / 8 + 3/8, (51 * \cos(2329/2000) * \exp(-411/400)) / 40 - (9 * \exp(-411/400) * \sin(2329/2000)) / 8 + 3/8, (51 * \cos(1173/1000) * \exp(-207/200)) / 40 - (9 * \exp(-207/200) * \sin(1173/1000)) / 8 + 3/8, (51 * \cos(2363/2000) * \exp(-417/400)) / 40 - (9 * \exp(-417/400) * \sin(2363/2000)) / 8 + 3/8, (51 * \cos(119/100) * \exp(-21/20)) / 40 - (9 * \exp(-21/20) * \sin(119/100)) / 8 + 3/8, (51 * \cos(2397/2000) * \exp(-423/400)) / 40 - (9 * \exp(-423/400) * \sin(2397/2000)) / 8 + 3/8, (51 * \cos(1207/1000) * \exp(-213/200)) / 40 - (9 * \exp(-213/200) * \sin(1207/1000)) / 8 + 3/8, (51 * \cos(2431/2000) * \exp(-429/400)) / 40 - (9 * \exp(-429/400) * \sin(2431/2000)) / 8 + 3/8, (51 * \cos(153/125) * \exp(-27/25)) / 40 - (9 * \exp(-27/25) * \sin(153/125)) / 8 + 3/8, (51 * \cos(493/400) * \exp(-87/80)) / 40 - (9 * \exp(-87/80) * \sin(493/400)) / 8 + 3/8, (51 * \cos(1241/1000) * \exp(-219/200)) / 40 - (9 * \exp(-219/200) * \sin(1241/1000)) / 8 + 3/8, (51 * \cos(2499/2000) * \exp(-441/400)) / 40 - (9 * \exp(-441/400) * \sin(2499/2000)) / 8 + 3/8, (51 * \cos(629/500) * \exp(-111/100)) / 40 - (9 * \exp(-111/100) * \sin(629/500)) / 8 + 3/8, (51 * \cos(2533/2000) * \exp(-447/400)) / 40 - (9 * \exp(-447/400) * \sin(2533/2000)) / 8 + 3/8, (51 * \cos(51/40) * \exp(-9/8)) / 40 - (9 * \exp(-9/8) * \sin(51/40)) / 8 + 3/8, (51 * \cos(2567/2000) * \exp(-453/400)) / 40 - (9 * \exp(-453/400) * \sin(2567/2000)) / 8 + 3/8, (51 * \cos(323/250) * \exp(-57/50)) / 40 - (9 * \exp(-57/50) * \sin(323/250)) / 8 + 3/8, (51 * \cos(2601/2000) * \exp(-459/400)) / 40 -$

$(9*\exp(-459/400)*\sin(2601/2000))/8 + 3/8, (51*\cos(1309/1000)*\exp(-231/200))/40 - (9*\exp(-231/200)*\sin(1309/1000))/8 + 3/8,$   
 $(51*\cos(527/400)*\exp(-93/80))/40 - (9*\exp(-93/80)*\sin(527/400))/8 + 3/8,$   
 $(51*\cos(663/500)*\exp(-117/100))/40 - (9*\exp(-117/100)*\sin(663/500))/8 + 3/8,$   
 $(51*\cos(2669/2000)*\exp(-471/400))/40 - (9*\exp(-471/400)*\sin(2669/2000))/8 + 3/8,$   
 $(51*\cos(1343/1000)*\exp(-237/200))/40 - (9*\exp(-237/200)*\sin(1343/1000))/8 + 3/8,$   
 $(51*\cos(2703/2000)*\exp(-477/400))/40 - (9*\exp(-477/400)*\sin(2703/2000))/8 + 3/8,$   
 $(51*\cos(34/25)*\exp(-6/5))/40 - (9*\exp(-6/5)*\sin(34/25))/8 + 3/8,$   
 $(51*\cos(2737/2000)*\exp(-483/400))/40 - (9*\exp(-483/400)*\sin(2737/2000))/8 + 3/8,$   
 $(51*\cos(1377/1000)*\exp(-243/200))/40 - (9*\exp(-243/200)*\sin(1377/1000))/8 + 3/8,$   
 $(51*\cos(2771/2000)*\exp(-489/400))/40 - (9*\exp(-489/400)*\sin(2771/2000))/8 + 3/8,$   
 $(51*\cos(697/500)*\exp(-123/100))/40 - (9*\exp(-123/100)*\sin(697/500))/8 + 3/8,$   
 $(51*\cos(561/400)*\exp(-99/80))/40 - (9*\exp(-99/80)*\sin(561/400))/8 + 3/8,$   
 $(51*\cos(1411/1000)*\exp(-249/200))/40 - (9*\exp(-249/200)*\sin(1411/1000))/8 + 3/8,$   
 $(51*\cos(2839/2000)*\exp(-501/400))/40 - (9*\exp(-501/400)*\sin(2839/2000))/8 + 3/8,$   
 $(51*\cos(357/250)*\exp(-63/50))/40 - (9*\exp(-63/50)*\sin(357/250))/8 + 3/8,$   
 $(51*\cos(2873/2000)*\exp(-507/400))/40 - (9*\exp(-507/400)*\sin(2873/2000))/8 + 3/8,$   
 $(51*\cos(289/200)*\exp(-51/40))/40 - (9*\exp(-51/40)*\sin(289/200))/8 + 3/8,$   
 $(51*\cos(2907/2000)*\exp(-513/400))/40 - (9*\exp(-513/400)*\sin(2907/2000))/8 + 3/8,$   
 $(51*\cos(731/500)*\exp(-129/100))/40 - (9*\exp(-129/100)*\sin(731/500))/8 + 3/8,$   
 $(51*\cos(2941/2000)*\exp(-519/400))/40 - (9*\exp(-519/400)*\sin(2941/2000))/8 + 3/8,$   
 $(51*\cos(1479/1000)*\exp(-261/200))/40 - (9*\exp(-261/200)*\sin(1479/1000))/8 + 3/8,$   
 $(51*\cos(119/80)*\exp(-21/16))/40 - (9*\exp(-21/16)*\sin(119/80))/8 + 3/8,$   
 $(51*\cos(187/125)*\exp(-33/25))/40 - (9*\exp(-33/25)*\sin(187/125))/8 + 3/8,$   
 $(51*\cos(3009/2000)*\exp(-531/400))/40 - (9*\exp(-531/400)*\sin(3009/2000))/8 + 3/8,$   
 $(51*\cos(1513/1000)*\exp(-267/200))/40 - (9*\exp(-267/200)*\sin(1513/1000))/8 + 3/8,$   
 $(51*\cos(3043/2000)*\exp(-537/400))/40 - (9*\exp(-537/400)*\sin(3043/2000))/8 + 3/8,$   
 $(51*\cos(153/100)*\exp(-27/20))/40 - (9*\exp(-27/20)*\sin(153/100))/8 + 3/8,$   
 $(51*\cos(3077/2000)*\exp(-543/400))/40 - (9*\exp(-543/400)*\sin(3077/2000))/8 + 3/8,$   
 $(51*\cos(1547/1000)*\exp(-273/200))/40 - (9*\exp(-273/200)*\sin(1547/1000))/8 + 3/8,$   
 $(51*\cos(3111/2000)*\exp(-549/400))/40 - (9*\exp(-549/400)*\sin(3111/2000))/8 + 3/8,$   
 $(51*\cos(391/250)*\exp(-69/50))/40 - (9*\exp(-69/50)*\sin(391/250))/8 + 3/8,$   
 $(51*\cos(629/400)*\exp(-111/80))/40 - (9*\exp(-111/80)*\sin(629/400))/8 + 3/8,$   
 $(51*\cos(1581/1000)*\exp(-279/200))/40 - (9*\exp(-279/200)*\sin(1581/1000))/8 + 3/8,$   
 $(51*\cos(3179/2000)*\exp(-561/400))/40 - (9*\exp(-561/400)*\sin(3179/2000))/8 + 3/8,$   
 $(51*\cos(799/500)*\exp(-141/100))/40 - (9*\exp(-141/100)*\sin(799/500))/8 + 3/8,$   
 $(51*\cos(3213/2000)*\exp(-567/400))/40 - (9*\exp(-567/400)*\sin(3213/2000))/8 + 3/8,$   
 $(51*\cos(323/200)*\exp(-57/40))/40 - (9*\exp(-57/40)*\sin(323/200))/8 + 3/8,$   
 $(51*\cos(3247/2000)*\exp(-573/400))/40 - (9*\exp(-573/400)*\sin(3247/2000))/8 + 3/8,$   
 $(51*\cos(204/125)*\exp(-36/25))/40 - (9*\exp(-36/25)*\sin(204/125))/8 + 3/8,$   
 $(51*\cos(3281/2000)*\exp(-579/400))/40 - (9*\exp(-579/400)*\sin(3281/2000))/8 + 3/8,$   
 $(51*\cos(1649/1000)*\exp(-291/200))/40 - (9*\exp(-291/200)*\sin(1649/1000))/8 + 3/8,$   
 $(51*\cos(663/400)*\exp(-117/80))/40 - (9*\exp(-117/80)*\sin(663/400))/8 + 3/8,$   
 $(51*\cos(833/500)*\exp(-147/100))/40 - (9*\exp(-147/100)*\sin(833/500))/8 + 3/8,$   
 $(51*\cos(3349/2000)*\exp(-591/400))/40 - (9*\exp(-591/400)*\sin(3349/2000))/8 + 3/8,$   
 $(51*\cos(1683/1000)*\exp(-297/200))/40 - (9*\exp(-297/200)*\sin(1683/1000))/8 + 3/8,$   
 $(51*\cos(3383/2000)*\exp(-597/400))/40 - (9*\exp(-597/400)*\sin(3383/2000))/8 + 3/8,$   
 $(51*\cos(17/10)*\exp(-3/2))/40 - (9*\exp(-3/2)*\sin(17/10))/8 + 3/8,$   
 $(51*\cos(3417/2000)*\exp(-603/400))/40 - (9*\exp(-603/400)*\sin(3417/2000))/8 + 3/8,$   
 $(51*\cos(1717/1000)*\exp(-303/200))/40 - (9*\exp(-303/200)*\sin(1717/1000))/8 + 3/8,$   
 $(51*\cos(3451/2000)*\exp(-609/400))/40 - (9*\exp(-609/400)*\sin(3451/2000))/8 + 3/8,$   
 $(51*\cos(867/500)*\exp(-153/100))/40 - (9*\exp(-153/100)*\sin(867/500))/8 + 3/8,$

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

A =

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

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

$81/200) * \sin(459/1000) / 25, - (153 * \cos(187/400) * \exp(-33/80)) / 80 - (6 * \exp(-33/80) * \sin(187/400)) / 25, - (153 * \cos(119/250) * \exp(-21/50)) / 80 - (6 * \exp(-21/50) * \sin(119/250)) / 25, - (153 * \cos(969/2000) * \exp(-171/400)) / 80 - (6 * \exp(-171/400) * \sin(969/2000)) / 25, - (153 * \cos(493/1000) * \exp(-87/200)) / 80 - (6 * \exp(-87/200) * \sin(493/1000)) / 25, - (153 * \cos(1003/2000) * \exp(-177/400)) / 80 - (6 * \exp(-177/400) * \sin(1003/2000)) / 25, - (153 * \cos(51/100) * \exp(-9/20)) / 80 - (6 * \exp(-9/20) * \sin(51/100)) / 25, - (153 * \cos(1037/2000) * \exp(-183/400)) / 80 - (6 * \exp(-183/400) * \sin(1037/2000)) / 25, - (153 * \cos(527/1000) * \exp(-93/200)) / 80 - (6 * \exp(-93/200) * \sin(527/1000)) / 25, - (153 * \cos(1071/2000) * \exp(-189/400)) / 80 - (6 * \exp(-189/400) * \sin(1071/2000)) / 25, - (153 * \cos(68/125) * \exp(-12/25)) / 80 - (6 * \exp(-12/25) * \sin(68/125)) / 25, - (153 * \cos(221/400) * \exp(-39/80)) / 80 - (6 * \exp(-39/80) * \sin(221/400)) / 25, - (153 * \cos(561/1000) * \exp(-99/200)) / 80 - (6 * \exp(-99/200) * \sin(561/1000)) / 25, - (153 * \cos(1139/2000) * \exp(-201/400)) / 80 - (6 * \exp(-201/400) * \sin(1139/2000)) / 25, - (153 * \cos(289/500) * \exp(-51/100)) / 80 - (6 * \exp(-51/100) * \sin(289/500)) / 25, - (153 * \cos(1173/2000) * \exp(-207/400)) / 80 - (6 * \exp(-207/400) * \sin(1173/2000)) / 25, - (153 * \cos(119/200) * \exp(-21/40)) / 80 - (6 * \exp(-21/40) * \sin(119/200)) / 25, - (153 * \cos(1207/2000) * \exp(-213/400)) / 80 - (6 * \exp(-213/400) * \sin(1207/2000)) / 25, - (153 * \cos(153/250) * \exp(-27/50)) / 80 - (6 * \exp(-27/50) * \sin(153/250)) / 25, - (153 * \cos(1241/2000) * \exp(-219/400)) / 80 - (6 * \exp(-219/400) * \sin(1241/2000)) / 25, - (153 * \cos(629/1000) * \exp(-111/200)) / 80 - (6 * \exp(-111/200) * \sin(629/1000)) / 25, - (153 * \cos(51/80) * \exp(-9/16)) / 80 - (6 * \exp(-9/16) * \sin(51/80)) / 25, - (153 * \cos(323/500) * \exp(-57/100)) / 80 - (6 * \exp(-57/100) * \sin(323/500)) / 25, - (153 * \cos(1309/2000) * \exp(-231/400)) / 80 - (6 * \exp(-231/400) * \sin(1309/2000)) / 25, - (153 * \cos(663/1000) * \exp(-117/200)) / 80 - (6 * \exp(-117/200) * \sin(663/1000)) / 25, - (153 * \cos(1343/2000) * \exp(-237/400)) / 80 - (6 * \exp(-237/400) * \sin(1343/2000)) / 25, - (153 * \cos(17/25) * \exp(-3/5)) / 80 - (6 * \exp(-3/5) * \sin(17/25)) / 25, - (153 * \cos(1377/2000) * \exp(-243/400)) / 80 - (6 * \exp(-243/400) * \sin(1377/2000)) / 25, - (153 * \cos(697/1000) * \exp(-123/200)) / 80 - (6 * \exp(-123/200) * \sin(697/1000)) / 25, - (153 * \cos(1411/2000) * \exp(-249/400)) / 80 - (6 * \exp(-249/400) * \sin(1411/2000)) / 25, - (153 * \cos(357/500) * \exp(-63/100)) / 80 - (6 * \exp(-63/100) * \sin(357/500)) / 25, - (153 * \cos(289/400) * \exp(-51/80)) / 80 - (6 * \exp(-51/80) * \sin(289/400)) / 25, - (153 * \cos(731/1000) * \exp(-129/200)) / 80 - (6 * \exp(-129/200) * \sin(731/1000)) / 25, - (153 * \cos(1479/2000) * \exp(-261/400)) / 80 - (6 * \exp(-261/400) * \sin(1479/2000)) / 25, - (153 * \cos(187/250) * \exp(-33/50)) / 80 - (6 * \exp(-33/50) * \sin(187/250)) / 25, - (153 * \cos(1513/2000) * \exp(-267/400)) / 80 - (6 * \exp(-267/400) * \sin(1513/2000)) / 25, - (153 * \cos(153/200) * \exp(-27/40)) / 80 - (6 * \exp(-27/40) * \sin(153/200)) / 25, - (153 * \cos(1547/2000) * \exp(-273/400)) / 80 - (6 * \exp(-273/400) * \sin(1547/2000)) / 25, - (153 * \cos(391/500) * \exp(-69/100)) / 80 - (6 * \exp(-69/100) * \sin(391/500)) / 25, - (153 * \cos(1581/2000) * \exp(-279/400)) / 80 - (6 * \exp(-279/400) * \sin(1581/2000)) / 25, - (153 * \cos(799/1000) * \exp(-141/200)) / 80 - (6 * \exp(-141/200) * \sin(799/1000)) / 25, - (153 * \cos(323/400) * \exp(-57/80)) / 80 - (6 * \exp(-57/80) * \sin(323/400)) / 25, - (153 * \cos(102/125) * \exp(-18/25)) / 80 - (6 * \exp(-18/25) * \sin(102/125)) / 25, - (153 * \cos(1649/2000) * \exp(-291/400)) / 80 - (6 * \exp(-291/400) * \sin(1649/2000)) / 25, - (153 * \cos(833/1000) * \exp(-147/200)) / 80 - (6 * \exp(-147/200) * \sin(833/1000)) / 25, - (153 * \cos(1683/2000) * \exp(-297/400)) / 80 - (6 * \exp(-297/400) * \sin(1683/2000)) / 25, - (153 * \cos(17/20) * \exp(-3/4)) / 80 - (6 * \exp(-3/4) * \sin(17/20)) / 25, - (153 * \cos(1717/2000) * \exp(-303/400)) / 80 - (6 * \exp(-303/400) * \sin(1717/2000)) / 25, - (153 * \cos(867/1000) * \exp(-153/200)) / 80 - (6 * \exp(-153/200) * \sin(867/1000)) / 25, - (153 * \cos(1751/2000) * \exp(-309/400)) / 80 - (6 * \exp(-309/400) * \sin(1751/2000)) / 25, - (153 * \cos(221/250) * \exp(-39/50)) / 80 - (6 * \exp(-39/50) * \sin(221/250)) / 25, - (153 * \cos(357/400) * \exp(-63/80)) / 80 - (6 * \exp(-63/80) * \sin(357/400)) / 25, - (153 * \cos(901/1000) * \exp(-159/200)) / 80 - (6 * \exp(-159/200) * \sin(901/1000)) / 25, - (153 * \cos(1819/2000) * \exp(-321/400)) / 80 - (6 * \exp(-321/400) * \sin(1819/2000)) / 25, - (153 * \cos(459/500) * \exp(-81/100)) / 80 - (6 * \exp(-81/100) * \sin(459/500)) / 25, - (153 * \cos(1853/2000) * \exp(-327/400)) / 80 - (6 * \exp(-327/400) * \sin(1853/2000)) / 25, - (153 * \cos(187/200) * \exp(-33/40)) / 80 - (6 * \exp(-33/40) * \sin(187/200)) / 25, - (153 * \cos(1887/2000) * \exp(-333/400)) / 80 -$

$(6*\exp(-333/400)*\sin(1887/2000))/25, - (153*\cos(119/125)*\exp(-21/25))/80 -$   
 $(6*\exp(-21/25)*\sin(119/125))/25, - (153*\cos(1921/2000)*\exp(-339/400))/80 -$   
 $(6*\exp(-339/400)*\sin(1921/2000))/25, - (153*\cos(969/1000)*\exp(-171/200))/80 -$   
 $(6*\exp(-171/200)*\sin(969/1000))/25, - (153*\cos(391/400)*\exp(-69/80))/80 -$   
 $(6*\exp(-69/80)*\sin(391/400))/25, - (153*\cos(493/500)*\exp(-87/100))/80 -$   
 $(6*\exp(-87/100)*\sin(493/500))/25, - (153*\cos(1989/2000)*\exp(-351/400))/80 -$   
 $(6*\exp(-351/400)*\sin(1989/2000))/25, - (153*\cos(1003/1000)*\exp(-177/200))/80 -$   
 $(6*\exp(-177/200)*\sin(1003/1000))/25, - (153*\cos(2023/2000)*\exp(-$   
 $357/400))/80 - (6*\exp(-357/400)*\sin(2023/2000))/25, - (153*\cos(51/50)*\exp(-$   
 $9/10))/80 - (6*\exp(-9/10)*\sin(51/50))/25, - (153*\cos(2057/2000)*\exp(-$   
 $363/400))/80 - (6*\exp(-363/400)*\sin(2057/2000))/25, -$   
 $(153*\cos(1037/1000)*\exp(-183/200))/80 - (6*\exp(-183/200)*\sin(1037/1000))/25,$   
 $- (153*\cos(2091/2000)*\exp(-369/400))/80 - (6*\exp(-$   
 $369/400)*\sin(2091/2000))/25, - (153*\cos(527/500)*\exp(-93/100))/80 - (6*\exp(-$   
 $93/100)*\sin(527/500))/25, - (153*\cos(17/16)*\exp(-15/16))/80 - (6*\exp(-$   
 $15/16)*\sin(17/16))/25, - (153*\cos(1071/1000)*\exp(-189/200))/80 - (6*\exp(-$   
 $189/200)*\sin(1071/1000))/25, - (153*\cos(2159/2000)*\exp(-381/400))/80 -$   
 $(6*\exp(-381/400)*\sin(2159/2000))/25, - (153*\cos(136/125)*\exp(-24/25))/80 -$   
 $(6*\exp(-24/25)*\sin(136/125))/25, - (153*\cos(2193/2000)*\exp(-387/400))/80 -$   
 $(6*\exp(-387/400)*\sin(2193/2000))/25, - (153*\cos(221/200)*\exp(-39/40))/80 -$   
 $(6*\exp(-39/40)*\sin(221/200))/25, - (153*\cos(2227/2000)*\exp(-393/400))/80 -$   
 $(6*\exp(-393/400)*\sin(2227/2000))/25, - (153*\cos(561/500)*\exp(-99/100))/80 -$   
 $(6*\exp(-99/100)*\sin(561/500))/25, - (153*\cos(2261/2000)*\exp(-399/400))/80 -$   
 $(6*\exp(-399/400)*\sin(2261/2000))/25, - (153*\cos(1139/1000)*\exp(-201/200))/80 -$   
 $(6*\exp(-201/200)*\sin(1139/1000))/25, - (153*\cos(459/400)*\exp(-81/80))/80 -$   
 $(6*\exp(-81/80)*\sin(459/400))/25, - (153*\cos(289/250)*\exp(-51/50))/80 -$   
 $(6*\exp(-51/50)*\sin(289/250))/25, - (153*\cos(2329/2000)*\exp(-411/400))/80 -$   
 $(6*\exp(-411/400)*\sin(2329/2000))/25, - (153*\cos(1173/1000)*\exp(-207/200))/80 -$   
 $(6*\exp(-207/200)*\sin(1173/1000))/25, - (153*\cos(2363/2000)*\exp(-$   
 $417/400))/80 - (6*\exp(-417/400)*\sin(2363/2000))/25, - (153*\cos(119/100)*\exp(-$   
 $21/20))/80 - (6*\exp(-21/20)*\sin(119/100))/25, - (153*\cos(2397/2000)*\exp(-$   
 $423/400))/80 - (6*\exp(-423/400)*\sin(2397/2000))/25, -$   
 $(153*\cos(1207/1000)*\exp(-213/200))/80 - (6*\exp(-213/200)*\sin(1207/1000))/25,$   
 $- (153*\cos(2431/2000)*\exp(-429/400))/80 - (6*\exp(-$   
 $429/400)*\sin(2431/2000))/25, - (153*\cos(153/125)*\exp(-27/25))/80 - (6*\exp(-$   
 $27/25)*\sin(153/125))/25, - (153*\cos(493/400)*\exp(-87/80))/80 - (6*\exp(-$   
 $87/80)*\sin(493/400))/25, - (153*\cos(1241/1000)*\exp(-219/200))/80 - (6*\exp(-$   
 $219/200)*\sin(1241/1000))/25, - (153*\cos(2499/2000)*\exp(-441/400))/80 -$   
 $(6*\exp(-441/400)*\sin(2499/2000))/25, - (153*\cos(629/500)*\exp(-111/100))/80 -$   
 $(6*\exp(-111/100)*\sin(629/500))/25, - (153*\cos(2533/2000)*\exp(-447/400))/80 -$   
 $(6*\exp(-447/400)*\sin(2533/2000))/25, - (153*\cos(51/40)*\exp(-9/8))/80 -$   
 $(6*\exp(-9/8)*\sin(51/40))/25, - (153*\cos(2567/2000)*\exp(-453/400))/80 -$   
 $(6*\exp(-453/400)*\sin(2567/2000))/25, - (153*\cos(323/250)*\exp(-57/50))/80 -$   
 $(6*\exp(-57/50)*\sin(323/250))/25, - (153*\cos(2601/2000)*\exp(-459/400))/80 -$   
 $(6*\exp(-459/400)*\sin(2601/2000))/25, - (153*\cos(1309/1000)*\exp(-231/200))/80 -$   
 $(6*\exp(-231/200)*\sin(1309/1000))/25, - (153*\cos(527/400)*\exp(-93/80))/80 -$   
 $(6*\exp(-93/80)*\sin(527/400))/25, - (153*\cos(663/500)*\exp(-117/100))/80 -$   
 $(6*\exp(-117/100)*\sin(663/500))/25, - (153*\cos(2669/2000)*\exp(-471/400))/80 -$   
 $(6*\exp(-471/400)*\sin(2669/2000))/25, - (153*\cos(1343/1000)*\exp(-237/200))/80 -$   
 $(6*\exp(-237/200)*\sin(1343/1000))/25, - (153*\cos(2703/2000)*\exp(-$   
 $477/400))/80 - (6*\exp(-477/400)*\sin(2703/2000))/25, - (153*\cos(34/25)*\exp(-$   
 $6/5))/80 - (6*\exp(-6/5)*\sin(34/25))/25, - (153*\cos(2737/2000)*\exp(-$   
 $483/400))/80 - (6*\exp(-483/400)*\sin(2737/2000))/25, -$   
 $(153*\cos(1377/1000)*\exp(-243/200))/80 - (6*\exp(-243/200)*\sin(1377/1000))/25,$   
 $- (153*\cos(2771/2000)*\exp(-489/400))/80 - (6*\exp(-$   
 $489/400)*\sin(2771/2000))/25, - (153*\cos(697/500)*\exp(-123/100))/80 - (6*\exp(-$   
 $123/100)*\sin(697/500))/25, - (153*\cos(561/400)*\exp(-99/80))/80 - (6*\exp(-$

$99/80) * \sin(561/400) / 25, - (153 * \cos(1411/1000) * \exp(-249/200)) / 80 - (6 * \exp(-249/200) * \sin(1411/1000)) / 25, - (153 * \cos(2839/2000) * \exp(-501/400)) / 80 - (6 * \exp(-501/400) * \sin(2839/2000)) / 25, - (153 * \cos(357/250) * \exp(-63/50)) / 80 - (6 * \exp(-63/50) * \sin(357/250)) / 25, - (153 * \cos(2873/2000) * \exp(-507/400)) / 80 - (6 * \exp(-507/400) * \sin(2873/2000)) / 25, - (153 * \cos(289/200) * \exp(-51/40)) / 80 - (6 * \exp(-51/40) * \sin(289/200)) / 25, - (153 * \cos(2907/2000) * \exp(-513/400)) / 80 - (6 * \exp(-513/400) * \sin(2907/2000)) / 25, - (153 * \cos(731/500) * \exp(-129/100)) / 80 - (6 * \exp(-129/100) * \sin(731/500)) / 25, - (153 * \cos(2941/2000) * \exp(-519/400)) / 80 - (6 * \exp(-519/400) * \sin(2941/2000)) / 25, - (153 * \cos(1479/1000) * \exp(-261/200)) / 80 - (6 * \exp(-261/200) * \sin(1479/1000)) / 25, - (153 * \cos(119/80) * \exp(-21/16)) / 80 - (6 * \exp(-21/16) * \sin(119/80)) / 25, - (153 * \cos(187/125) * \exp(-33/25)) / 80 - (6 * \exp(-33/25) * \sin(187/125)) / 25, - (153 * \cos(3009/2000) * \exp(-531/400)) / 80 - (6 * \exp(-531/400) * \sin(3009/2000)) / 25, - (153 * \cos(1513/1000) * \exp(-267/200)) / 80 - (6 * \exp(-267/200) * \sin(1513/1000)) / 25, - (153 * \cos(3043/2000) * \exp(-537/400)) / 80 - (6 * \exp(-537/400) * \sin(3043/2000)) / 25, - (153 * \cos(153/100) * \exp(-27/20)) / 80 - (6 * \exp(-27/20) * \sin(153/100)) / 25, - (153 * \cos(3077/2000) * \exp(-543/400)) / 80 - (6 * \exp(-543/400) * \sin(3077/2000)) / 25, - (153 * \cos(1547/1000) * \exp(-273/200)) / 80 - (6 * \exp(-273/200) * \sin(1547/1000)) / 25, - (153 * \cos(3111/2000) * \exp(-549/400)) / 80 - (6 * \exp(-549/400) * \sin(3111/2000)) / 25, - (153 * \cos(391/250) * \exp(-69/50)) / 80 - (6 * \exp(-69/50) * \sin(391/250)) / 25, - (153 * \cos(629/400) * \exp(-111/80)) / 80 - (6 * \exp(-111/80) * \sin(629/400)) / 25, - (153 * \cos(1581/1000) * \exp(-279/200)) / 80 - (6 * \exp(-279/200) * \sin(1581/1000)) / 25, - (153 * \cos(3179/2000) * \exp(-561/400)) / 80 - (6 * \exp(-561/400) * \sin(3179/2000)) / 25, - (153 * \cos(799/500) * \exp(-141/100)) / 80 - (6 * \exp(-141/100) * \sin(799/500)) / 25, - (153 * \cos(3213/2000) * \exp(-567/400)) / 80 - (6 * \exp(-567/400) * \sin(3213/2000)) / 25, - (153 * \cos(323/200) * \exp(-57/40)) / 80 - (6 * \exp(-57/40) * \sin(323/200)) / 25, - (153 * \cos(3247/2000) * \exp(-573/400)) / 80 - (6 * \exp(-573/400) * \sin(3247/2000)) / 25, - (153 * \cos(204/125) * \exp(-36/25)) / 80 - (6 * \exp(-36/25) * \sin(204/125)) / 25, - (153 * \cos(3281/2000) * \exp(-579/400)) / 80 - (6 * \exp(-579/400) * \sin(3281/2000)) / 25, - (153 * \cos(1649/1000) * \exp(-291/200)) / 80 - (6 * \exp(-291/200) * \sin(1649/1000)) / 25, - (153 * \cos(663/400) * \exp(-117/80)) / 80 - (6 * \exp(-117/80) * \sin(663/400)) / 25, - (153 * \cos(833/500) * \exp(-147/100)) / 80 - (6 * \exp(-147/100) * \sin(833/500)) / 25, - (153 * \cos(3349/2000) * \exp(-591/400)) / 80 - (6 * \exp(-591/400) * \sin(3349/2000)) / 25, - (153 * \cos(1683/1000) * \exp(-297/200)) / 80 - (6 * \exp(-297/200) * \sin(1683/1000)) / 25, - (153 * \cos(3383/2000) * \exp(-597/400)) / 80 - (6 * \exp(-597/400) * \sin(3383/2000)) / 25, - (153 * \cos(17/10) * \exp(-3/2)) / 80 - (6 * \exp(-3/2) * \sin(17/10)) / 25, - (153 * \cos(3417/2000) * \exp(-603/400)) / 80 - (6 * \exp(-603/400) * \sin(3417/2000)) / 25, - (153 * \cos(1717/1000) * \exp(-303/200)) / 80 - (6 * \exp(-303/200) * \sin(1717/1000)) / 25, - (153 * \cos(3451/2000) * \exp(-609/400)) / 80 - (6 * \exp(-609/400) * \sin(3451/2000)) / 25, - (153 * \cos(867/500) * \exp(-153/100)) / 80 - (6 * \exp(-153/100) * \sin(867/500)) / 25, - (153 * \cos(697/400) * \exp(-123/80)) / 80 - (6 * \exp(-123/80) * \sin(697/400)) / 25, - (153 * \cos(1751/1000) * \exp(-309/200)) / 80 - (6 * \exp(-309/200) * \sin(1751/1000)) / 25, - (153 * \cos(3519/2000) * \exp(-621/400)) / 80 - (6 * \exp(-621/400) * \sin(3519/2000)) / 25, - (153 * \cos(221/125) * \exp(-39/25)) / 80 - (6 * \exp(-39/25) * \sin(221/125)) / 25, - (153 * \cos(3553/2000) * \exp(-627/400)) / 80 - (6 * \exp(-627/400) * \sin(3553/2000)) / 25, - (153 * \cos(357/200) * \exp(-63/40)) / 80 - (6 * \exp(-63/40) * \sin(357/200)) / 25, - (153 * \cos(3587/2000) * \exp(-633/400)) / 80 - (6 * \exp(-633/400) * \sin(3587/2000)) / 25, - (153 * \cos(901/500) * \exp(-159/100)) / 80 - (6 * \exp(-159/100) * \sin(901/500)) / 25, - (153 * \cos(3621/2000) * \exp(-639/400)) / 80 - (6 * \exp(-639/400) * \sin(3621/2000)) / 25, - (153 * \cos(1819/1000) * \exp(-321/200)) / 80 - (6 * \exp(-321/200) * \sin(1819/1000)) / 25, - (153 * \cos(731/400) * \exp(-129/80)) / 80 - (6 * \exp(-129/80) * \sin(731/400)) / 25, - (153 * \cos(459/250) * \exp(-81/50)) / 80 - (6 * \exp(-81/50) * \sin(459/250)) / 25, - (153 * \cos(3689/2000) * \exp(-651/400)) / 80 - (6 * \exp(-651/400) * \sin(3689/2000)) / 25, - (153 * \cos(1853/1000) * \exp(-327/200)) / 80 - (6 * \exp(-327/200) * \sin(1853/1000)) / 25, - (153 * \cos(3723/2000) * \exp(-657/400)) / 80 - (6 * \exp(-657/400) * \sin(3723/2000)) / 25, - (153 * \cos(187/100) * \exp(-$



$$\begin{aligned}
& 33/20)/80 - (6*\exp(-33/20)*\sin(187/100))/25, - (153*\cos(3757/2000)*\exp(- \\
& 663/400))/80 - (6*\exp(-663/400)*\sin(3757/2000))/25, - \\
& (153*\cos(1887/1000)*\exp(-333/200))/80 - (6*\exp(-333/200)*\sin(1887/1000))/25, \\
& - (153*\cos(3791/2000)*\exp(-669/400))/80 - (6*\exp(- \\
& 669/400)*\sin(3791/2000))/25, - (153*\cos(238/125)*\exp(-42/25))/80 - (6*\exp(- \\
& 42/25)*\sin(238/125))/25, - (153*\cos(153/80)*\exp(-27/16))/80 - (6*\exp(- \\
& 27/16)*\sin(153/80))/25, - (153*\cos(1921/1000)*\exp(-339/200))/80 - (6*\exp(- \\
& 339/200)*\sin(1921/1000))/25, - (153*\cos(3859/2000)*\exp(-681/400))/80 - \\
& (6*\exp(-681/400)*\sin(3859/2000))/25, - (153*\cos(969/500)*\exp(-171/100))/80 - \\
& (6*\exp(-171/100)*\sin(969/500))/25, - (153*\cos(3893/2000)*\exp(-687/400))/80 - \\
& (6*\exp(-687/400)*\sin(3893/2000))/25, - (153*\cos(391/200)*\exp(-69/40))/80 - \\
& (6*\exp(-69/40)*\sin(391/200))/25, - (153*\cos(3927/2000)*\exp(-693/400))/80 - \\
& (6*\exp(-693/400)*\sin(3927/2000))/25, - (153*\cos(493/250)*\exp(-87/50))/80 - \\
& (6*\exp(-87/50)*\sin(493/250))/25, - (153*\cos(3961/2000)*\exp(-699/400))/80 - \\
& (6*\exp(-699/400)*\sin(3961/2000))/25, - (153*\cos(1989/1000)*\exp(-351/200))/80 \\
& - (6*\exp(-351/200)*\sin(1989/1000))/25, - (153*\cos(799/400)*\exp(-141/80))/80 - \\
& (6*\exp(-141/80)*\sin(799/400))/25, - (153*\cos(1003/500)*\exp(-177/100))/80 - \\
& (6*\exp(-177/100)*\sin(1003/500))/25, - (153*\cos(4029/2000)*\exp(-711/400))/80 - \\
& (6*\exp(-711/400)*\sin(4029/2000))/25, - (153*\cos(2023/1000)*\exp(-357/200))/80 \\
& - (6*\exp(-357/200)*\sin(2023/1000))/25, - (153*\cos(4063/2000)*\exp(- \\
& 717/400))/80 - (6*\exp(-717/400)*\sin(4063/2000))/25, - (153*\cos(51/25)*\exp(- \\
& 9/5))/80 - (6*\exp(-9/5)*\sin(51/25))/25, - (153*\cos(4097/2000)*\exp(- \\
& 723/400))/80 - (6*\exp(-723/400)*\sin(4097/2000))/25, - \\
& (153*\cos(2057/1000)*\exp(-363/200))/80 - (6*\exp(-363/200)*\sin(2057/1000))/25, \\
& - (153*\cos(4131/2000)*\exp(-729/400))/80 - (6*\exp(- \\
& 729/400)*\sin(4131/2000))/25, - (153*\cos(1037/500)*\exp(-183/100))/80 - \\
& (6*\exp(-183/100)*\sin(1037/500))/25, - (153*\cos(833/400)*\exp(-147/80))/80 - \\
& (6*\exp(-147/80)*\sin(833/400))/25, - (153*\cos(2091/1000)*\exp(-369/200))/80 - \\
& (6*\exp(-369/200)*\sin(2091/1000))/25, - (153*\cos(4199/2000)*\exp(-741/400))/80 \\
& - (6*\exp(-741/400)*\sin(4199/2000))/25, - (153*\cos(527/250)*\exp(-93/50))/80 - \\
& (6*\exp(-93/50)*\sin(527/250))/25, - (153*\cos(4233/2000)*\exp(-747/400))/80 - \\
& (6*\exp(-747/400)*\sin(4233/2000))/25, - (153*\cos(17/8)*\exp(-15/8))/80 - \\
& (6*\exp(-15/8)*\sin(17/8))/25]
\end{aligned}$$

ans =

'location'

ans =

'best'

A =

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

An =

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

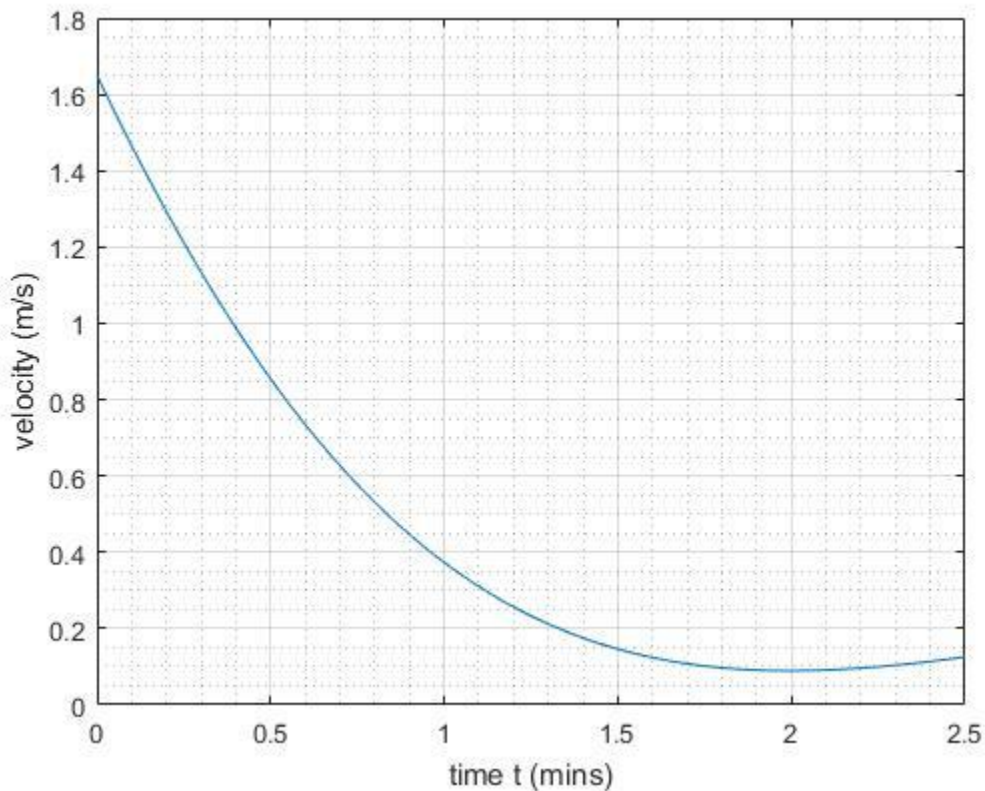
$3/80 * \sin(17/400) / 25, - (153 * \cos(51/1000) * \exp(-9/200)) / 80 - (6 * \exp(-9/200) * \sin(51/1000)) / 25, - (153 * \cos(119/2000) * \exp(-21/400)) / 80 - (6 * \exp(-21/400) * \sin(119/2000)) / 25, - (153 * \cos(17/250) * \exp(-3/50)) / 80 - (6 * \exp(-3/50) * \sin(17/250)) / 25, - (153 * \cos(153/2000)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

$93/200) * \sin(527/1000) / 25, - (153 * \cos(1071/2000) * \exp(-189/400)) / 80 - (6 * \exp(-189/400) * \sin(1071/2000)) / 25, - (153 * \cos(68/125) * \exp(-12/25)) / 80 - (6 * \exp(-12/25) * \sin(68/125)) / 25, - (153 * \cos(221/400) * \exp(-39/80)) / 80 - (6 * \exp(-39/80) * \sin(221/400)) / 25, - (153 * \cos(561/1000) * \exp(-99/200)) / 80 - (6 * \exp(-99/200) * \sin(561/1000)) / 25, - (153 * \cos(1139/2000) * \exp(-201/400)) / 80 - (6 * \exp(-201/400) * \sin(1139/2000)) / 25, - (153 * \cos(289/500) * \exp(-51/100)) / 80 - (6 * \exp(-51/100) * \sin(289/500)) / 25, - (153 * \cos(1173/2000) * \exp(-207/400)) / 80 - (6 * \exp(-207/400) * \sin(1173/2000)) / 25, - (153 * \cos(119/200) * \exp(-21/40)) / 80 - (6 * \exp(-21/40) * \sin(119/200)) / 25, - (153 * \cos(1207/2000) * \exp(-213/400)) / 80 - (6 * \exp(-213/400) * \sin(1207/2000)) / 25, - (153 * \cos(153/250) * \exp(-27/50)) / 80 - (6 * \exp(-27/50) * \sin(153/250)) / 25, - (153 * \cos(1241/2000) * \exp(-219/400)) / 80 - (6 * \exp(-219/400) * \sin(1241/2000)) / 25, - (153 * \cos(629/1000) * \exp(-111/200)) / 80 - (6 * \exp(-111/200) * \sin(629/1000)) / 25, - (153 * \cos(51/80) * \exp(-9/16)) / 80 - (6 * \exp(-9/16) * \sin(51/80)) / 25, - (153 * \cos(323/500) * \exp(-57/100)) / 80 - (6 * \exp(-57/100) * \sin(323/500)) / 25, - (153 * \cos(1309/2000) * \exp(-231/400)) / 80 - (6 * \exp(-231/400) * \sin(1309/2000)) / 25, - (153 * \cos(663/1000) * \exp(-117/200)) / 80 - (6 * \exp(-117/200) * \sin(663/1000)) / 25, - (153 * \cos(1343/2000) * \exp(-237/400)) / 80 - (6 * \exp(-237/400) * \sin(1343/2000)) / 25, - (153 * \cos(17/25) * \exp(-3/5)) / 80 - (6 * \exp(-3/5) * \sin(17/25)) / 25, - (153 * \cos(1377/2000) * \exp(-243/400)) / 80 - (6 * \exp(-243/400) * \sin(1377/2000)) / 25, - (153 * \cos(697/1000) * \exp(-123/200)) / 80 - (6 * \exp(-123/200) * \sin(697/1000)) / 25, - (153 * \cos(1411/2000) * \exp(-249/400)) / 80 - (6 * \exp(-249/400) * \sin(1411/2000)) / 25, - (153 * \cos(357/500) * \exp(-63/100)) / 80 - (6 * \exp(-63/100) * \sin(357/500)) / 25, - (153 * \cos(289/400) * \exp(-51/80)) / 80 - (6 * \exp(-51/80) * \sin(289/400)) / 25, - (153 * \cos(731/1000) * \exp(-129/200)) / 80 - (6 * \exp(-129/200) * \sin(731/1000)) / 25, - (153 * \cos(1479/2000) * \exp(-261/400)) / 80 - (6 * \exp(-261/400) * \sin(1479/2000)) / 25, - (153 * \cos(187/250) * \exp(-33/50)) / 80 - (6 * \exp(-33/50) * \sin(187/250)) / 25, - (153 * \cos(1513/2000) * \exp(-267/400)) / 80 - (6 * \exp(-267/400) * \sin(1513/2000)) / 25, - (153 * \cos(153/200) * \exp(-27/40)) / 80 - (6 * \exp(-27/40) * \sin(153/200)) / 25, - (153 * \cos(1547/2000) * \exp(-273/400)) / 80 - (6 * \exp(-273/400) * \sin(1547/2000)) / 25, - (153 * \cos(391/500) * \exp(-69/100)) / 80 - (6 * \exp(-69/100) * \sin(391/500)) / 25, - (153 * \cos(1581/2000) * \exp(-279/400)) / 80 - (6 * \exp(-279/400) * \sin(1581/2000)) / 25, - (153 * \cos(799/1000) * \exp(-141/200)) / 80 - (6 * \exp(-141/200) * \sin(799/1000)) / 25, - (153 * \cos(323/400) * \exp(-57/80)) / 80 - (6 * \exp(-57/80) * \sin(323/400)) / 25, - (153 * \cos(102/125) * \exp(-18/25)) / 80 - (6 * \exp(-18/25) * \sin(102/125)) / 25, - (153 * \cos(1649/2000) * \exp(-291/400)) / 80 - (6 * \exp(-291/400) * \sin(1649/2000)) / 25, - (153 * \cos(833/1000) * \exp(-147/200)) / 80 - (6 * \exp(-147/200) * \sin(833/1000)) / 25, - (153 * \cos(1683/2000) * \exp(-297/400)) / 80 - (6 * \exp(-297/400) * \sin(1683/2000)) / 25, - (153 * \cos(17/20) * \exp(-3/4)) / 80 - (6 * \exp(-3/4) * \sin(17/20)) / 25, - (153 * \cos(1717/2000) * \exp(-303/400)) / 80 - (6 * \exp(-303/400) * \sin(1717/2000)) / 25, - (153 * \cos(867/1000) * \exp(-153/200)) / 80 - (6 * \exp(-153/200) * \sin(867/1000)) / 25, - (153 * \cos(1751/2000) * \exp(-309/400)) / 80 - (6 * \exp(-309/400) * \sin(1751/2000)) / 25, - (153 * \cos(221/250) * \exp(-39/50)) / 80 - (6 * \exp(-39/50) * \sin(221/250)) / 25, - (153 * \cos(357/400) * \exp(-63/80)) / 80 - (6 * \exp(-63/80) * \sin(357/400)) / 25, - (153 * \cos(901/1000) * \exp(-159/200)) / 80 - (6 * \exp(-159/200) * \sin(901/1000)) / 25, - (153 * \cos(1819/2000) * \exp(-321/400)) / 80 - (6 * \exp(-321/400) * \sin(1819/2000)) / 25, - (153 * \cos(459/500) * \exp(-81/100)) / 80 - (6 * \exp(-81/100) * \sin(459/500)) / 25, - (153 * \cos(1853/2000) * \exp(-327/400)) / 80 - (6 * \exp(-327/400) * \sin(1853/2000)) / 25, - (153 * \cos(187/200) * \exp(-33/40)) / 80 - (6 * \exp(-33/40) * \sin(187/200)) / 25, - (153 * \cos(1887/2000) * \exp(-333/400)) / 80 - (6 * \exp(-333/400) * \sin(1887/2000)) / 25, - (153 * \cos(119/125) * \exp(-21/25)) / 80 - (6 * \exp(-21/25) * \sin(119/125)) / 25, - (153 * \cos(1921/2000) * \exp(-339/400)) / 80 - (6 * \exp(-339/400) * \sin(1921/2000)) / 25, - (153 * \cos(969/1000) * \exp(-171/200)) / 80 - (6 * \exp(-171/200) * \sin(969/1000)) / 25, - (153 * \cos(391/400) * \exp(-69/80)) / 80 - (6 * \exp(-69/80) * \sin(391/400)) / 25, - (153 * \cos(493/500) * \exp(-87/100)) / 80 - (6 * \exp(-87/100) * \sin(493/500)) / 25, - (153 * \cos(1989/2000) * \exp(-351/400)) / 80 - (6 * \exp(-351/400) * \sin(1989/2000)) / 25, - (153 * \cos(1003/1000) * \exp(-177/200)) / 80 - (6 * \exp(-177/200) * \sin(1003/1000)) / 25, - (153 * \cos(2023/2000) * \exp(-$

$$\begin{aligned}
& 357/400)/80 - (6*\exp(-357/400)*\sin(2023/2000))/25, - (153*\cos(51/50)*\exp(-9/10))/80 - (6*\exp(-9/10)*\sin(51/50))/25, - (153*\cos(2057/2000)*\exp(-363/400))/80 - (6*\exp(-363/400)*\sin(2057/2000))/25, - \\
& (153*\cos(1037/1000)*\exp(-183/200))/80 - (6*\exp(-183/200)*\sin(1037/1000))/25, - (153*\cos(2091/2000)*\exp(-369/400))/80 - (6*\exp(-369/400)*\sin(2091/2000))/25, - (153*\cos(527/500)*\exp(-93/100))/80 - (6*\exp(-93/100)*\sin(527/500))/25, - (153*\cos(17/16)*\exp(-15/16))/80 - (6*\exp(-15/16)*\sin(17/16))/25, - (153*\cos(1071/1000)*\exp(-189/200))/80 - (6*\exp(-189/200)*\sin(1071/1000))/25, - (153*\cos(2159/2000)*\exp(-381/400))/80 - \\
& (6*\exp(-381/400)*\sin(2159/2000))/25, - (153*\cos(136/125)*\exp(-24/25))/80 - (6*\exp(-24/25)*\sin(136/125))/25, - (153*\cos(2193/2000)*\exp(-387/400))/80 - (6*\exp(-387/400)*\sin(2193/2000))/25, - (153*\cos(221/200)*\exp(-39/40))/80 - (6*\exp(-39/40)*\sin(221/200))/25, - (153*\cos(2227/2000)*\exp(-393/400))/80 - (6*\exp(-393/400)*\sin(2227/2000))/25, - (153*\cos(561/500)*\exp(-99/100))/80 - (6*\exp(-99/100)*\sin(561/500))/25, - (153*\cos(2261/2000)*\exp(-399/400))/80 - (6*\exp(-399/400)*\sin(2261/2000))/25, - (153*\cos(1139/1000)*\exp(-201/200))/80 - (6*\exp(-201/200)*\sin(1139/1000))/25, - (153*\cos(459/400)*\exp(-81/80))/80 - (6*\exp(-81/80)*\sin(459/400))/25, - (153*\cos(289/250)*\exp(-51/50))/80 - (6*\exp(-51/50)*\sin(289/250))/25, - (153*\cos(2329/2000)*\exp(-411/400))/80 - (6*\exp(-411/400)*\sin(2329/2000))/25, - (153*\cos(1173/1000)*\exp(-207/200))/80 - (6*\exp(-207/200)*\sin(1173/1000))/25, - (153*\cos(2363/2000)*\exp(-417/400))/80 - (6*\exp(-417/400)*\sin(2363/2000))/25, - (153*\cos(119/100)*\exp(-21/20))/80 - (6*\exp(-21/20)*\sin(119/100))/25, - (153*\cos(2397/2000)*\exp(-423/400))/80 - (6*\exp(-423/400)*\sin(2397/2000))/25, - \\
& (153*\cos(1207/1000)*\exp(-213/200))/80 - (6*\exp(-213/200)*\sin(1207/1000))/25, - (153*\cos(2431/2000)*\exp(-429/400))/80 - (6*\exp(-429/400)*\sin(2431/2000))/25, - (153*\cos(153/125)*\exp(-27/25))/80 - (6*\exp(-27/25)*\sin(153/125))/25, - (153*\cos(493/400)*\exp(-87/80))/80 - (6*\exp(-87/80)*\sin(493/400))/25, - (153*\cos(1241/1000)*\exp(-219/200))/80 - (6*\exp(-219/200)*\sin(1241/1000))/25, - (153*\cos(2499/2000)*\exp(-441/400))/80 - (6*\exp(-441/400)*\sin(2499/2000))/25, - (153*\cos(629/500)*\exp(-111/100))/80 - (6*\exp(-111/100)*\sin(629/500))/25, - (153*\cos(2533/2000)*\exp(-447/400))/80 - (6*\exp(-447/400)*\sin(2533/2000))/25, - (153*\cos(51/40)*\exp(-9/8))/80 - (6*\exp(-9/8)*\sin(51/40))/25, - (153*\cos(2567/2000)*\exp(-453/400))/80 - (6*\exp(-453/400)*\sin(2567/2000))/25, - (153*\cos(323/250)*\exp(-57/50))/80 - (6*\exp(-57/50)*\sin(323/250))/25, - (153*\cos(2601/2000)*\exp(-459/400))/80 - (6*\exp(-459/400)*\sin(2601/2000))/25, - (153*\cos(1309/1000)*\exp(-231/200))/80 - (6*\exp(-231/200)*\sin(1309/1000))/25, - (153*\cos(527/400)*\exp(-93/80))/80 - (6*\exp(-93/80)*\sin(527/400))/25, - (153*\cos(663/500)*\exp(-117/100))/80 - (6*\exp(-117/100)*\sin(663/500))/25, - (153*\cos(2669/2000)*\exp(-471/400))/80 - (6*\exp(-471/400)*\sin(2669/2000))/25, - (153*\cos(1343/1000)*\exp(-237/200))/80 - (6*\exp(-237/200)*\sin(1343/1000))/25, - (153*\cos(2703/2000)*\exp(-477/400))/80 - (6*\exp(-477/400)*\sin(2703/2000))/25, - (153*\cos(34/25)*\exp(-6/5))/80 - (6*\exp(-6/5)*\sin(34/25))/25, - (153*\cos(2737/2000)*\exp(-483/400))/80 - (6*\exp(-483/400)*\sin(2737/2000))/25, - \\
& (153*\cos(1377/1000)*\exp(-243/200))/80 - (6*\exp(-243/200)*\sin(1377/1000))/25, - (153*\cos(2771/2000)*\exp(-489/400))/80 - (6*\exp(-489/400)*\sin(2771/2000))/25, - (153*\cos(697/500)*\exp(-123/100))/80 - (6*\exp(-123/100)*\sin(697/500))/25, - (153*\cos(561/400)*\exp(-99/80))/80 - (6*\exp(-99/80)*\sin(561/400))/25, - (153*\cos(1411/1000)*\exp(-249/200))/80 - (6*\exp(-249/200)*\sin(1411/1000))/25, - (153*\cos(2839/2000)*\exp(-501/400))/80 - (6*\exp(-501/400)*\sin(2839/2000))/25, - (153*\cos(357/250)*\exp(-63/50))/80 - (6*\exp(-63/50)*\sin(357/250))/25, - (153*\cos(2873/2000)*\exp(-507/400))/80 - (6*\exp(-507/400)*\sin(2873/2000))/25, - (153*\cos(289/200)*\exp(-51/40))/80 - (6*\exp(-51/40)*\sin(289/200))/25, - (153*\cos(2907/2000)*\exp(-513/400))/80 - (6*\exp(-513/400)*\sin(2907/2000))/25, - (153*\cos(731/500)*\exp(-129/100))/80 - (6*\exp(-129/100)*\sin(731/500))/25, - (153*\cos(2941/2000)*\exp(-519/400))/80 -
\end{aligned}$$

$(6*\exp(-519/400)*\sin(2941/2000))/25, - (153*\cos(1479/1000)*\exp(-261/200))/80$   
 $- (6*\exp(-261/200)*\sin(1479/1000))/25, - (153*\cos(119/80)*\exp(-21/16))/80 -$   
 $(6*\exp(-21/16)*\sin(119/80))/25, - (153*\cos(187/125)*\exp(-33/25))/80 -$   
 $(6*\exp(-33/25)*\sin(187/125))/25, - (153*\cos(3009/2000)*\exp(-531/400))/80 -$   
 $(6*\exp(-531/400)*\sin(3009/2000))/25, - (153*\cos(1513/1000)*\exp(-267/200))/80$   
 $- (6*\exp(-267/200)*\sin(1513/1000))/25, - (153*\cos(3043/2000)*\exp(-$   
 $537/400))/80 - (6*\exp(-537/400)*\sin(3043/2000))/25, - (153*\cos(153/100)*\exp(-$   
 $27/20))/80 - (6*\exp(-27/20)*\sin(153/100))/25, - (153*\cos(3077/2000)*\exp(-$   
 $543/400))/80 - (6*\exp(-543/400)*\sin(3077/2000))/25, -$   
 $(153*\cos(1547/1000)*\exp(-273/200))/80 - (6*\exp(-273/200)*\sin(1547/1000))/25,$   
 $- (153*\cos(3111/2000)*\exp(-549/400))/80 - (6*\exp(-$   
 $549/400)*\sin(3111/2000))/25, - (153*\cos(391/250)*\exp(-69/50))/80 - (6*\exp(-$   
 $69/50)*\sin(391/250))/25, - (153*\cos(629/400)*\exp(-111/80))/80 - (6*\exp(-$   
 $111/80)*\sin(629/400))/25, - (153*\cos(1581/1000)*\exp(-279/200))/80 - (6*\exp(-$   
 $279/200)*\sin(1581/1000))/25, - (153*\cos(3179/2000)*\exp(-561/400))/80 -$   
 $(6*\exp(-561/400)*\sin(3179/2000))/25, - (153*\cos(799/500)*\exp(-141/100))/80 -$   
 $(6*\exp(-141/100)*\sin(799/500))/25, - (153*\cos(3213/2000)*\exp(-567/400))/80 -$   
 $(6*\exp(-567/400)*\sin(3213/2000))/25, - (153*\cos(323/200)*\exp(-57/40))/80 -$   
 $(6*\exp(-57/40)*\sin(323/200))/25, - (153*\cos(3247/2000)*\exp(-573/400))/80 -$   
 $(6*\exp(-573/400)*\sin(3247/2000))/25, - (153*\cos(204/125)*\exp(-36/25))/80 -$   
 $(6*\exp(-36/25)*\sin(204/125))/25, - (153*\cos(3281/2000)*\exp(-579/400))/80 -$   
 $(6*\exp(-579/400)*\sin(3281/2000))/25, - (153*\cos(1649/1000)*\exp(-291/200))/80$   
 $- (6*\exp(-291/200)*\sin(1649/1000))/25, - (153*\cos(663/400)*\exp(-117/80))/80 -$   
 $(6*\exp(-117/80)*\sin(663/400))/25, - (153*\cos(833/500)*\exp(-147/100))/80 -$   
 $(6*\exp(-147/100)*\sin(833/500))/25, - (153*\cos(3349/2000)*\exp(-591/400))/80 -$   
 $(6*\exp(-591/400)*\sin(3349/2000))/25, - (153*\cos(1683/1000)*\exp(-297/200))/80$   
 $- (6*\exp(-297/200)*\sin(1683/1000))/25, - (153*\cos(3383/2000)*\exp(-$   
 $597/400))/80 - (6*\exp(-597/400)*\sin(3383/2000))/25, - (153*\cos(17/10)*\exp(-$   
 $3/2))/80 - (6*\exp(-3/2)*\sin(17/10))/25, - (153*\cos(3417/2000)*\exp(-$   
 $603/400))/80 - (6*\exp(-603/400)*\sin(3417/2000))/25, -$   
 $(153*\cos(1717/1000)*\exp(-303/200))/80 - (6*\exp(-303/200)*\sin(1717/1000))/25,$   
 $- (153*\cos(3451/2000)*\exp(-609/400))/80 - (6*\exp(-$   
 $609/400)*\sin(3451/2000))/25, - (153*\cos(867/500)*\exp(-153/100))/80 - (6*\exp(-$   
 $153/100)*\sin(867/500))/25, - (153*\cos(697/400)*\exp(-123/80))/80 - (6*\exp(-$   
 $123/80)*\sin(697/400))/25, - (153*\cos(1751/1000)*\exp(-309/200))/80 - (6*\exp(-$   
 $309/200)*\sin(1751/1000))/25, - (153*\cos(3519/2000)*\exp(-621/400))/80 -$   
 $(6*\exp(-621/400)*\sin(3519/2000))/25, - (153*\cos(221/125)*\exp(-39/25))/80 -$   
 $(6*\exp(-39/25)*\sin(221/125))/25, - (153*\cos(3553/2000)*\exp(-627/400))/80 -$   
 $(6*\exp(-627/400)*\sin(3553/2000))/25, - (153*\cos(357/200)*\exp(-63/40))/80 -$   
 $(6*\exp(-63/40)*\sin(357/200))/25, - (153*\cos(3587/2000)*\exp(-633/400))/80 -$   
 $(6*\exp(-633/400)*\sin(3587/2000))/25, - (153*\cos(901/500)*\exp(-159/100))/80 -$   
 $(6*\exp(-159/100)*\sin(901/500))/25, - (153*\cos(3621/2000)*\exp(-639/400))/80 -$   
 $(6*\exp(-639/400)*\sin(3621/2000))/25, - (153*\cos(1819/1000)*\exp(-321/200))/80$   
 $- (6*\exp(-321/200)*\sin(1819/1000))/25, - (153*\cos(731/400)*\exp(-129/80))/80 -$   
 $(6*\exp(-129/80)*\sin(731/400))/25, - (153*\cos(459/250)*\exp(-81/50))/80 -$   
 $(6*\exp(-81/50)*\sin(459/250))/25, - (153*\cos(3689/2000)*\exp(-651/400))/80 -$   
 $(6*\exp(-651/400)*\sin(3689/2000))/25, - (153*\cos(1853/1000)*\exp(-327/200))/80$   
 $- (6*\exp(-327/200)*\sin(1853/1000))/25, - (153*\cos(3723/2000)*\exp(-$   
 $657/400))/80 - (6*\exp(-657/400)*\sin(3723/2000))/25, - (153*\cos(187/100)*\exp(-$   
 $33/20))/80 - (6*\exp(-33/20)*\sin(187/100))/25, - (153*\cos(3757/2000)*\exp(-$   
 $663/400))/80 - (6*\exp(-663/400)*\sin(3757/2000))/25, -$   
 $(153*\cos(1887/1000)*\exp(-333/200))/80 - (6*\exp(-333/200)*\sin(1887/1000))/25,$   
 $- (153*\cos(3791/2000)*\exp(-669/400))/80 - (6*\exp(-$   
 $669/400)*\sin(3791/2000))/25, - (153*\cos(238/125)*\exp(-42/25))/80 - (6*\exp(-$   
 $42/25)*\sin(238/125))/25, - (153*\cos(153/80)*\exp(-27/16))/80 - (6*\exp(-$   
 $27/16)*\sin(153/80))/25, - (153*\cos(1921/1000)*\exp(-339/200))/80 - (6*\exp(-$   
 $339/200)*\sin(1921/1000))/25, - (153*\cos(3859/2000)*\exp(-681/400))/80 -$

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



**FIGURE (1)**

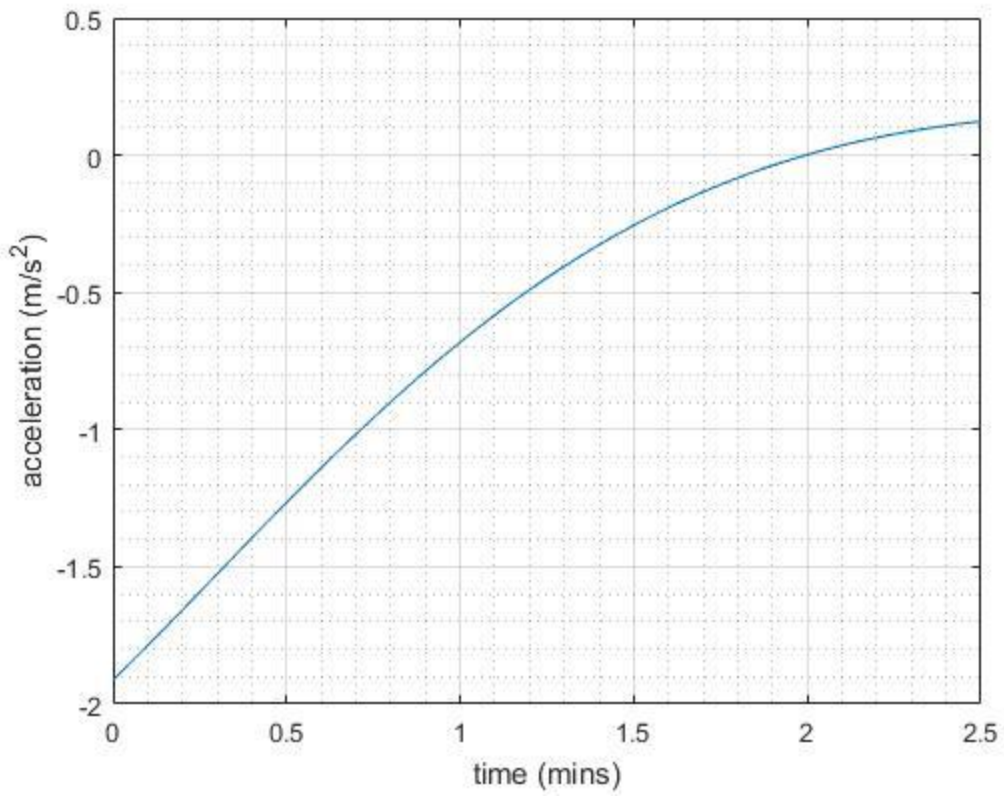
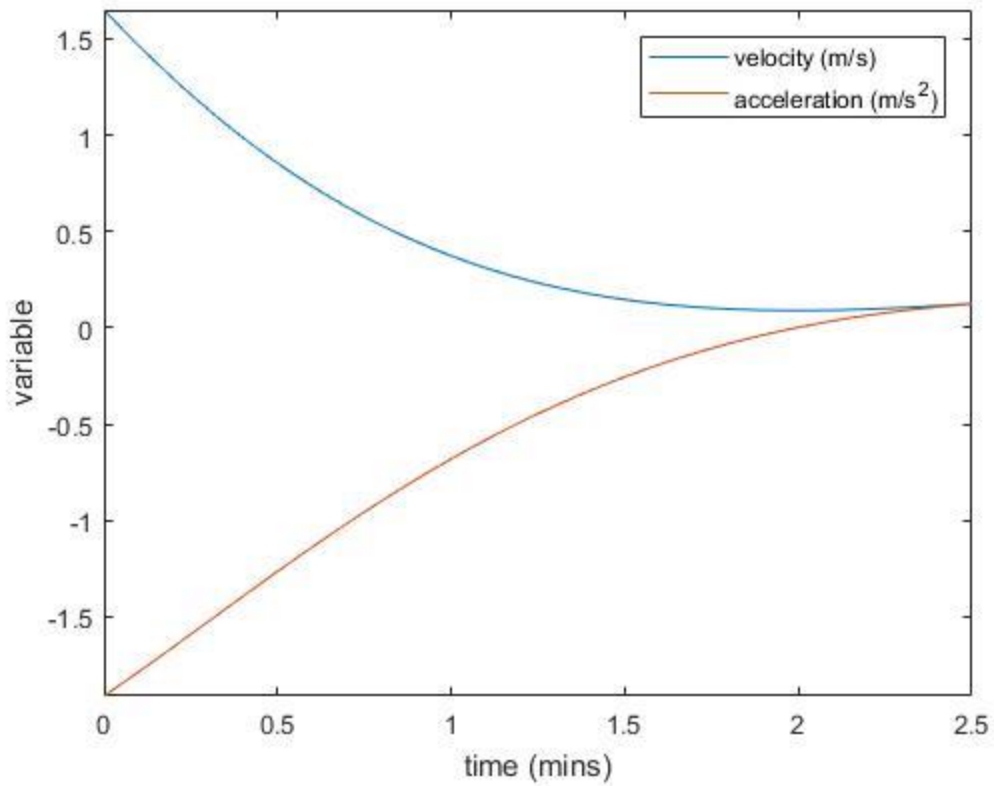


FIGURE (2)



**FIGURE (3)**

**QUESTION 3**

y =

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

d =

$$(1571 \cdot \sin(5 \cdot x)^{10}) / 20$$

T =

$$(4713 \cdot \sin(3600)) / 5120 - (32991 \cdot \sin(1800)) / 10240 - (4713 \cdot \sin(5400)) / 20480 + (1571 \cdot \sin(7200)) / 40960 - (1571 \cdot \sin(9000)) / 512000 + 890757 / 256$$

F =

$$3.4787e+03$$