Круглов Иван 1.2

ЛР 3.3

--> integrate('sin(x)','x',0,%pi)

 ans = 2

--> deff('[y]=f(x)','y=x*sin(30*x)/sqrt(1-((x/(2*%pi))^2))')

ans = -2.543259

--> abs(exact-intg(0,2*%pi,f))

ans = 9.337D-11

--> x=50:5:65;

--> y=log10(x)

 y= 1.69897 1.7403627 1.7781513 1.8129134

--> dy=diff(y)

dy = 0.041392 0.037788 0.034762

--> a=3, b=9

 a=5

 b=12

--> deff('y=G(x)','y=sqrt(3*x-1)'); intg(3,9,G)

 ans = 24.432687

--> function y=f(t),y=t^2/sqrt(3+sin(t)), endfunction;

--> [I,er]=intg(0,1,f)

 er = 1.933D-15

 I = 0.174119

--> x=43:4:60

 x = 43. 47. 51. 55. 59.

--> dy2=diff(y,2)

 dy2 = column 1 to 13

  -0.0009413 -0.0008925 -0.0008477 -0.0008066 -0.0007687 -0.0007336 -0.0007012 -0.000671 -0.000643 -0.0006169 -0.0005925 -0.0005696 -0.0005482

       column 14 to 26

 -0.0005281 -0.0005092 -0.0004914 -0.0004746 -0.0004588 -0.0004438 -0.0004296 -0.0004161 -0.0004034 -0.0003913 -0.0003797 -0.0003688 -0.0003583

       column 27 to 39

  -0.0003483 -0.0003388 -0.0003297 -0.000321 -0.0003127 -0.0003048 -0.0002971 -0.0002898 -0.0002828 -0.000276 -0.0002696 -0.0002633 -0.0002573

       column 40 to 52

  -0.0002516 -0.000246 -0.0002407 -0.0002355 -0.0002305 -0.0002257 -0.0002211 -0.0002166 -0.0002122 -0.000208 -0.000204 -0.0002001 -0.0001963

       column 53 to 59

  -0.0001926 -0.000189 -0.0001855 -0.0001822 -0.0001789 -0.0001758 -0.0001727

--> dy3=diff(y,3)

 dy3 = column 1 to 13

  0.0000488 0.0000448 0.0000411 0.0000379 0.000035 0.0000325 0.0000301 0.000028 0.0000261 0.0000244 0.0000228 0.0000214 0.0000201

       column 14 to 26

  0.0000189 0.0000178 0.0000168 0.0000159 0.000015 0.0000142 0.0000134 0.0000128 0.0000121 0.0000115 0.000011 0.0000105 0.00001

       column 27 to 39

  0.0000095 0.0000091 0.0000087 0.0000083 0.000008 0.0000076 0.0000073 0.000007 0.0000067 0.0000065 0.0000062 0.000006 0.0000058

       column 40 to 52

0.0000056   0.0000054   0.0000052   0.000005   0.0000048   0.0000046   0.0000
045   0.0000043   0.0000042   0.0000041   0.0000039   0.0000038   0.0000037

column 53 to 58

0.0000036   0.0000035   0.0000034   0.0000033   0.0000032   0.0000031