Джугели Дмитрий ИВТ-13

Лаб1

Номер1

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| Код  clc  clear  a = 0;  b = 2;  n = 22;  h = (b - a) / n;  F = [1.0 1.3200. 1.5516 1.7273 1.8651 1.9756 2.0667 2.1429 2.2075 2.2632 2.3115...  2.3539 2.3913 2.4247 2.4545 2.4815 2.5059 2.5281 ...  2.5484 2.5670 2.5842 2.6000];  Integ1 = h \* sum(F)  integ2 = h \* ((F(1) + F(22)) / 2 + sum (F) - F(22)) |
| Вывод  Integ1 =  4.3519  integ2 =  4.2792 |

Номер 2

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| Код  clc  clear    syms x    f1 = @(x) exp(-0.7 \* sqrt(x));  i1 = quadl(f1 , 1, 7, 10^(-7))    f2 = @(x) (3 + sin(1.1\*x)./ (x+1).^2);  i2 = quadl(f2 , 0, 6, 10^(-7)) |
| Вывод  i1=  1.6190  i2 =  18.3219 |

Номер 3

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| Код  clc  clear    syms x    f1 = @(x) sqrt(x) .\* sin(x);  f2 = @(x) log(5 + 4 \* cos(x));  f3 = @(x) sqrt(sin(x)) .\* cos(sqrt(x));    in1 = quad(f1, 0, pi, 10^(-6))  in2 = quad(f2, pi, 2 \* pi)  in3 = quad(f3, 2 \* pi+ 0.0001, 2.8 \* pi) |
| Вывод  in1 =  2.4353  in2 =  4.3552  in3 =  -1.9112 |

Номер 4

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| Код  clc  clear  clf    i = 1  S = @(p) sin(p.^2);  C = @(p) cos(p.^2);    for t = 0 : 0.01: 5  x(i) = quad(S, 0, t);  y(i) = quad(C, 0, t);  i = i+ 1;  end  t = 0 : 0.01: 5;    subplot(1, 2, 1)    hold on  grid on    plot(t, y, 'g')  plot(t, x, 'b')    subplot(1, 2, 2)    hold on  grid on    plot(x, y, 'r') |
| Вывод    i =  1 |