

Расчетная работа № 3.

Задание. Методом Симпсона с $n = 4$ найти интеграл.

Варианты:

1. $\int_0^1 \cos(x + x^3) dx$

2. $\int_0^1 \sin(x^4 + 2x^3 + x^2) dx$

3. $\int_0^1 e^{\sin x} dx$

4. $\int_0^1 \sin x e^{-x^2} dx$

5. $\int_0^1 e^{\cos x} dx$

6. $\int_0^1 chx^2 dx$

7. $\int_0^1 \cos x^2 dx$

8. $\int_0^1 \sin(x + x^3) dx$

9. $\int_0^1 \cos x e^{-x^2} dx$

10. $\int_0^2 \sin 2x e^{-x^2} dx$

11. $\int_0^2 e^{-(x+\frac{1}{x})} dx$

12. $\int_0^2 \ln x \cdot (x+1)^{-1} dx$

13. $\int_{\pi/2}^{\pi} \sqrt{x} e^{-x^2} dx$

14. $\int_0^1 \cos x^3 dx$

15. $\int_0^1 \cos x^2 dx$

16. $\int_{\pi/4}^{\pi/2} \ln \sin x dx$

17. $\int_0^{\pi} \cos(2 \sin x) dx$

$$18. \int_0^{\pi} x^2 e^{-x^2} dx$$

$$19. \int_0^{\pi} x^2 e^{-x^2} dx$$

$$20. \int_{\pi/2}^{\pi} \cos(x + x^3) dx$$

$$21. \int_1^2 \sin x^3 dx$$

$$22. \int_1^2 x^{-1} \ln(1+x) dx$$

$$23. \int_1^2 x^{-1} e^x dx$$

$$24. \int_1^2 shx^2 dx$$

$$25. \int_0^{\pi/4} x \sin x^3 dx$$

$$26. \int_0^{\pi/4} \ln(1 + \cos x) dx$$

$$27. \int_0^{\pi/4} x \cos x^3 dx$$

$$28. \int_{0.1}^2 \frac{\cos x}{\sqrt{x}} dx$$

$$29. \int_{0.1}^2 \frac{\sin x}{\sqrt{x}} dx$$

$$30. \int_0^{\pi} \sin(2 \cos x) dx$$