

Additional Problems for Calc B Gateway Exam Database

1. $\int (x - 3)^{20}(x + 1)^2 dx$
2. $\int x^3 e^{x^2} dx$
3. $\int \frac{dx}{x \ln^2(x)}$
4. $\int e^{e^x} e^x dx$
5. $\int \frac{\sqrt{\ln(x)}}{x} dx$
6. $\int \frac{dx}{(1 + x^2) \arctan(x)}$
7. $\int \cos^2(3x + 1) dx$
8. $\int x \cos\left(\frac{x}{2}\right) dx$
9. $\int t \ln t dt$
10. $\int x e^{-x} dx$
11. $\int \sqrt{x} \ln(x) dx$
12. $\int \frac{3x^2 - 8x + 1}{x^3 - 4x^2 + x + 6} dx$
13. $\int x^3 \ln(x) dx$
14. $\int \ln(\sqrt{x}) dx$
15. $\int \frac{x^2}{x^2 - 1} dx$
16. $\int \cos^2(x) dx$
17. $\int \frac{x^2}{x^2 - 1} dx$
18. $\int \frac{e^x}{2 + e^x} dx$
19. $\int \frac{x^2 + 1}{x^2 - x} dx$
20. $\int \frac{x^3 + x^2 + 1}{x^2} dx$
21. $\int \frac{\cos x}{\sin^3 x + \sin x} dx$

22. $\int \frac{x^4}{x^2 - 1} dx$

23. $\int \frac{x dx}{x^2 + 2x + 1}$

24. $\int x(\ln x)^4 dx$

25. $\int_0^{\frac{\pi}{2}} \frac{\cos(x) dx}{\sqrt{\sin(x)}}$

26. $\int_e^{e^e} \frac{dx}{x \ln(x)}$

27. $\int_0^1 \frac{\arcsin(\theta)}{\sqrt{1 - \theta^2}} d\theta$

28. $\int \frac{x \cos(x^2)}{\sqrt{\sin(x^2)}}$

29. $\int_0^1 \frac{x^3 dx}{\sqrt{x^4 + 9}}$

30. $\int_0^1 r \sqrt{1 - r^2} dr$

31. $\int_1^e (\ln w)^3 dw$

Maybe More Complicated Integrals :)

32. $\int \frac{x dx}{1 + x^4}$

33. $\int \cos(\sqrt{x}) dx$

34. $\int e^{\sqrt{x}} dx$

35. $\int x^5 \sqrt{1 + x^2} dx$

36. $\int x^5 \sin(x^3) dx$

37. $\int \frac{e^z dz}{e^{2z} + 3e^z + 2}$

38. $\int \arctan(t) dt$