1. $\int \sqrt[5]{x^4}dx = \dfrac{5}{9}x^{\frac{9}{5}} + C$

2. $\int \dfrac{3 + \cos^3 x}{\cos^2 x}dx = 3\tan x + \sin x + C$

3. $\int e^{3x+1}dx = \dfrac{1}{3}e^{3x+1} + C$

4. $\int \cos 2x dx = \dfrac{\sin x}{2} + C$

5. $\int \cos^2 x dx = \dfrac{x}{2} + \dfrac{\sin 2x}{4} + C$

6. $\int \dfrac{3}{x}dx = 3\log |x| + C$

7. $\int \dfrac{e^x - e^{-x}}{e^x + e^{-x}}dx = \log(e^x + e^{-x}) + C$

8. $\int_{-\pi}^{\pi} \sin x \cos^2 x dx = 0$

9. $\int_{-\pi}^{\pi} \sin^3 x dx = 0$

10. $\int_{-1}^{1} xe^{x^2} dx = 0$

11. $\int_{-1}^{1} \sin x e^{\cos x}dx = 0$

12. $\int_{-\pi}^{\pi} \dfrac{\sin x}{\cos x + 2}dx = 0$

13. $\int \sin(3x - 2)dx = -\dfrac{1}{3}\cos(3x - 2) + C$

14. $\int (2x + 1)\sqrt{x + 2}dx = \dfrac{5}{4}(x + 2)^{\frac{3}{2}}(x - \dfrac{1}{2}) + C$

15. $\int \dfrac{x}{1 + x^2} \log(1 + x^2)dx = \dfrac{1}{4}(\log(1 + x^2))^2 + C$

16. $\displaystyle \int xe^{3x}\,dx = \frac{1}{3}xe^{3x} - \frac{1}{9}e^{3x} + C$

17. $\displaystyle \int \sqrt{x}\log x\,dx = \frac{2}{3}x^{\frac{3}{2}}\log x - \frac{4}{9}x^{\frac{3}{2}} + C$

18. $\displaystyle \int x\sin(2x+1)\,dx = -\frac{x}{2}\cos(2x+1) + \frac{\sin(2x+1)}{4} + C$

19. $\displaystyle \int \frac{x^2+1}{x+1}\,dx = \frac{x^2}{2} - x + 2\log|x+1| + C$

20. $\displaystyle \int \frac{x+5}{(x+1)(x-3)}\,dx = \log\left|\frac{|x-3|^2}{x+1}\right| + C$

21. $\displaystyle \int \sin x\cos 3x\,dx = -\frac{\cos 4x}{8} + \frac{\cos 2x}{4} + C$

22. $\displaystyle \int \frac{\sin x\cos x}{1+\sin x}\,dx = -\log|1+\sin x| + \sin x + C$

23. $\displaystyle \int \frac{1}{\sqrt{2x+3}-\sqrt{2x}}\,dx = \frac{1}{9}(2x+3)^{\frac{3}{2}} + \frac{(2x)^{\frac{3}{2}}}{9} + C$

24. $\displaystyle \int \frac{1}{\cos x}\,dx = \frac{1}{2}\log\left|\frac{1+\sin x}{1-\sin x}\right| + C$

25. $\displaystyle \int \frac{\log x}{x(\log x+1)^2}\,dx = \log|\log x + 1| + \frac{1}{\log x + 1} + C$

26. $\displaystyle \int \frac{e^{2x}}{e^x-1}\,dx = e^x + \log|e^x - 1| + C$

27. $\displaystyle \int \frac{5^{2x}}{2\log 5}\,dx = \frac{5^{2x}}{(2\log 5)^2} + C$

28. $\displaystyle \int \frac{3(x^2-4x)}{x^3-6x^2+3}\,dx = \log|x^3 - 6x^2 + 3| + C$

29. $\displaystyle \int xe^{-\frac{1}{3}x}\,dx = -3xe^{-\frac{x}{3}} - 9e^{-\frac{x}{3}} + C$

30. $\displaystyle \int \frac{x+4}{x(x+2)}\,dx = \log\left|\frac{x^2}{x+2}\right| + C$

31. $\displaystyle\int 2\sin^2 x\,dx = x - \frac{\sin 2x}{2} + C$

32. $\displaystyle\int_1^3 x^{-3}\,dx = \frac{4}{9}$

33. $\displaystyle\int_0^1 \sqrt{e^{1-x}}\,dx = 2(e^{\frac{1}{2}} - 1)$

34. $\displaystyle\int_1^e \frac{\log x}{x}\,dx = \frac{1}{2}$

35. $\displaystyle\int_0^1 x^2 e^{x^3}\,dx = \frac{1}{3}(e - 1)$

36. $\displaystyle\int_0^2 xe^x\,dx = e^2 + 1$

37. $\displaystyle\int_e^{e^2} \log x\,dx = e^2$

38. $\displaystyle\int_{e^2}^{e^3} \frac{1}{x}\,dx = 1$

39. $\displaystyle\int_0^\pi \sin x\,dx = 2$

40. $\displaystyle\int_0^{\frac{\pi}{6}} \frac{1}{\cos^2 x}\,dx = \frac{1}{\sqrt{3}}$

41. $\displaystyle\int_0^{\frac{\pi}{2}} \frac{\sin x}{2 + \cos x}\,dx = \log\frac{3}{2}$

42. $\displaystyle\int_{-2}^2 \frac{1}{x^2 + 4}\,dx = \frac{\pi}{4}$

43. $\displaystyle\int_0^2 \frac{1}{\sqrt{16 - x^2}}\,dx = \frac{\pi}{6}$

44. $\displaystyle\int_0^1 \frac{e^x - 1}{e^x + 1}\,dx = \log\frac{(e + 1)^2}{4e}$

45. $\displaystyle\int_1^2 e^{\sqrt{x}}\,dx = 2(\sqrt{2} - 1)e^{\sqrt{2}}$

46. $\displaystyle\int_0^2 x^3\sqrt{4-x^2}dx = \frac{64}{15}$

47. $\displaystyle\int_0^{\frac{\pi}{2}} \frac{\sin^3 x}{1+\cos x}dx = \frac{1}{2}$

48. $\displaystyle\int_0^1 \frac{3e^x}{e^x+1}dx = 3\log\frac{e+1}{2}$

49. $\displaystyle\int_0^1 \sqrt{4-x^2}dx = \frac{\pi}{3} + \frac{\sqrt{3}}{2}$

50. $\displaystyle\int_1^{\sqrt{3}} \frac{1}{x^2+3}dx = \frac{\pi}{12\sqrt{3}}$

51. $\displaystyle\int_0^1 \frac{x^2}{\sqrt{2-x^2}}dx = \frac{\pi}{4} - \frac{1}{2}$

52. $\displaystyle\int_1^e x\log x\,dx = \frac{e^2}{4} + \frac{1}{4}$

53. $\displaystyle\int_0^1 x^2 e^{2x}dx = \frac{1}{4}(e^2-1)$

54. $\displaystyle\int_1^e (\log x)^2 dx = e - 2$

55. $\displaystyle\int_0^{\frac{\pi}{2}} e^x \sin x\,dx = \frac{e^{\frac{\pi}{2}}+1}{2}$

56. $\displaystyle\int_0^{\pi} e^x \cos x\,dx = -\frac{e^{\pi}+1}{2}$

57. $\displaystyle\int_1^4 \frac{1}{x^2-2x+4}dx = \frac{\pi}{3\sqrt{3}}$

58. $\displaystyle\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \tan^2 x\,dx = \frac{2}{\sqrt{3}} - \frac{\pi}{6}$

59. $\displaystyle\int_{\log\frac{1}{\sqrt{3}}}^{\log\sqrt{3}} \frac{e^x}{e^{2x}+1}dx = \frac{\pi}{6}$

60. $\displaystyle\int_0^{\frac{\pi}{2}} \frac{\sin x}{\sin x + \cos x}dx = \frac{\pi}{4}$