1. $\displaystyle\int \frac{u\,du}{a+bu} = \frac{u}{b} - \frac{a}{b^2}\ln|a+bu| + C$

2. $\displaystyle\int \frac{du}{u(a+bu)} = \frac{1}{a}\ln\left|\frac{u}{a+bu}\right| + C$

3. $\displaystyle\int \frac{du}{u^2(a+bu)} = -\frac{1}{au} + \frac{b}{a^2}\ln\left|\frac{a+bu}{u}\right| + C$

4. $\displaystyle\int \frac{u\,du}{(a+bu)^2} = \frac{1}{b^2}\left(\ln|a+bu| + \frac{a}{a+bu}\right) + C$

5. $\displaystyle\int \frac{du}{u(a+bu)^2} = \frac{1}{a(a+bu)} + \frac{1}{a^2}\ln\left|\frac{u}{a+bu}\right| + C$

6. $\displaystyle\int \frac{du}{u^2(a+bu)^2} = -\frac{a+2bu}{a^2u(a+bu)} + \frac{2b}{a^3}\ln\left|\frac{a+bu}{u}\right| + C$

7. $\displaystyle\int \frac{u^2\,du}{(a+bu)^2} = \frac{1}{b^3}\left(bu - \frac{a^2}{a+bu} - 2a\ln|a+bu|\right) + C$

8. $\displaystyle\int \frac{u^2\,du}{(a+bu)^3} = \frac{1}{b^3}\left(\frac{2a}{a+bu} - \frac{a^2}{2(a+bu)^2} + \ln|a+bu|\right) + C$

9. $\displaystyle\int \frac{u^2\,du}{(a+bu)^n} = \frac{1}{b^3}\left(\frac{-1}{(n-3)(a+bu)^{n-3}} + \frac{2a}{(n-2)(a+bu)^{n-2}} \quad \cdots \right.$
$\displaystyle\left. \cdots \quad - \frac{a^2}{(n-1)(a+bu)^{n-1}}\right) + C \qquad (n \neq 1, 2, 3)$

10. $\displaystyle\int \frac{du}{(a+bu)(c+ku)} = \frac{1}{bc-ak}\ln\left|\frac{a+bu}{c+ku}\right| + C$

11. $\displaystyle\int \frac{u\,du}{(a+bu)(c+ku)} = \frac{1}{bc-ak}\left(\frac{c}{k}\ln|c+ku| - \frac{a}{b}\ln|a+bu|\right) + C$

12. $\displaystyle\int \frac{du}{u^2-a^2} = \frac{1}{2a}\ln\left|\frac{u-a}{u+a}\right| + C \qquad (a > 0)$

13. $\displaystyle\int u\sqrt{a+bu}\,du = \frac{2(3bu-2a)(a+bu)^{3/2}}{15b^2} + C$

14. $\displaystyle\int u^2\sqrt{a+bu}\,du = \frac{2(8a^2-12abu+15b^2u^2)(a+bu)^{3/2}}{105b^3} + C$

15. $\displaystyle\int \frac{u\,du}{\sqrt{a+bu}} = \frac{2(bu-2a)\sqrt{a+bu}}{3b^2} + C$

16. $\displaystyle\int \frac{u^2\,du}{\sqrt{a+bu}} = \frac{2(3b^2u^2-4abu+8a^2)\sqrt{a+bu}}{15b^3} + C$

17. $\displaystyle\int \frac{du}{u\sqrt{a+bu}} = \frac{1}{\sqrt{a}}\ln\left|\frac{\sqrt{a+bu}-\sqrt{a}}{\sqrt{a+bu}+\sqrt{a}}\right| + C \qquad (a > 0)$

18. $\displaystyle\int \frac{\sqrt{a+bu}\,du}{u} = 2\sqrt{a+bu} + \sqrt{a}\ln\left|\frac{\sqrt{a+bu}-\sqrt{a}}{\sqrt{a+bu}+\sqrt{a}}\right| + C \qquad (a > 0)$

19. $\displaystyle\int \frac{du}{u\sqrt{a^2-u^2}} = -\frac{1}{a}\ln\left|\frac{a+\sqrt{a^2-u^2}}{u}\right| + C \qquad (a > 0)$

20. $\displaystyle\int \frac{du}{u^2\sqrt{a^2-u^2}} = -\frac{\sqrt{a^2-u^2}}{a^2u} + C$

21. $\displaystyle\int \frac{\sqrt{a^2-u^2}\,du}{u} = \sqrt{a^2-u^2} - a\ln\left|\frac{a+\sqrt{a^2-u^2}}{u}\right| + C \qquad (a>0)$

22. $\displaystyle\int \sqrt{u^2\pm a^2}\,du = \frac{1}{2}\left(u\sqrt{u^2\pm a^2} \pm a^2\ln\left|u+\sqrt{u^2\pm a^2}\right|\right) + C$

23. $\displaystyle\int u^2\sqrt{u^2\pm a^2}\,du = \frac{u}{8}\left(2u^2\pm a^2\right)\sqrt{u^2\pm a^2} - \frac{a^4}{8}\ln\left|u+\sqrt{u^2\pm a^2}\right| + C$

24. $\displaystyle\int \frac{\sqrt{u^2+a^2}\,du}{u} = \sqrt{u^2+a^2} - a\ln\left|\frac{a+\sqrt{u^2+a^2}}{u}\right| + C \qquad (a>0)$

25. $\displaystyle\int \frac{\sqrt{u^2\pm a^2}\,du}{u^2} = -\frac{\sqrt{u^2\pm a^2}}{u} + \ln\left|u+\sqrt{u^2\pm a^2}\right| + C$

26. $\displaystyle\int \frac{du}{\sqrt{u^2\pm a^2}} = \ln\left|u+\sqrt{u^2\pm a^2}\right| + C$

27. $\displaystyle\int \frac{du}{u\sqrt{u^2+a^2}} = \frac{1}{a}\ln\left|\frac{\sqrt{u^2+a^2}-a}{u}\right| + C \qquad (a>0)$

28. $\displaystyle\int \frac{u^2\,du}{\sqrt{u^2\pm a^2}} = \frac{1}{2}\left(u\sqrt{u^2\pm a^2} \mp a^2\ln\left|u+\sqrt{u^2\pm a^2}\right|\right) + C$

29. $\displaystyle\int \frac{du}{u^2\sqrt{u^2\pm a^2}} = \mp\frac{\sqrt{u^2\pm a^2}}{a^2u} + C$

30. $\displaystyle\int u^n e^{au}\,du = \frac{u^n e^{au}}{a} - \frac{n}{a}\int u^{n-1}e^{au}\,du \qquad (n\geq 1)$

31. $\displaystyle\int u^n \ln^m u\,du = \frac{u^{n+1}}{n+1}\ln^m u - \frac{m}{n+1}\int u^n\ln^{m-1}u\,du \qquad (m,n\neq -1)$

32. $\displaystyle\int (\ln u)^n\,du = u(\ln u)^n - n\int (\ln u)^{n-1}\,du$

33. $\displaystyle\int \frac{du}{a+be^{cu}} = \frac{1}{ac}\left(cu - \ln|a+be^{cu}|\right) + C$

34. $\displaystyle\int \frac{du}{(a^2-u^2)^{3/2}} = \frac{u}{a^2\sqrt{a^2-u^2}} + C$

35. $\displaystyle\int (u^2\pm a^2)^{3/2}\,du = \frac{u}{8}\left(2u^2\pm 5a^2\right)\sqrt{u^2\pm a^2} + \frac{3a^4}{8}\ln\left|u+\sqrt{u^2\pm a^2}\right| + C$

36. $\displaystyle\int \frac{du}{(u^2\pm a^2)^{3/2}} = \frac{\pm u}{a^2\sqrt{u^2\pm a^2}} + C$

37. $\displaystyle\int \frac{u^2\,du}{(u^2\pm a^2)^{3/2}} = \frac{-u}{\sqrt{u^2\pm a^2}} + \ln\left|u+\sqrt{u^2\pm a^2}\right| + C$

38. $\displaystyle\int \sqrt{\frac{a+u}{b+u}}\,du = \sqrt{(a+u)(b+u)} + (a-b)\ln\left(\sqrt{a+u}+\sqrt{b+u}\right) + C$

39. $\displaystyle\int \frac{du}{\sqrt{(a+u)(b+u)}} = \ln\left|\frac{a+b}{2} + u + \sqrt{(a+u)(b+u)}\right| + C$

40. $\displaystyle\int \sqrt{a+bu+cu^2}\,du = \frac{2cu+b}{4c}\sqrt{a+bu+cu^2} - \frac{b^2-4ac}{8c^{3/2}}\ln\left|2cu+b+2\sqrt{c}\sqrt{a+bu+cu^2}\right| + C \qquad (c>0)$