Key Integral Practice (LIPET, Inv Trig, usub)

1. $-\frac{1}{3}(1+\cos x)^3+c$ 2. $\frac{1}{6}\tan^2 3x+c$ 3. $-(\ln x)^{-1}+c$ 4. $\frac{1}{3}\ln\left|\cos e^{-3x}\right|+c$

5. $\frac{1}{2}\ln\left|\sec 2x+\tan 2x\right|+c$ 6. $\frac{1}{6}\arctan(\frac{3x}{2})+c$ 7. $\frac{1}{18}\ln\left|4+9x^2\right|+c$ 8. $\frac{1}{2}arc\sec(x^2)+c$

9. $\arcsin(\frac{\sin x}{3})+c$ 10. $-\arcsin(e^{-x})+c$ 11. $\frac{1}{2}\ln\left|\sec 2x+\tan 2x\right|-\frac{1}{2}\sin 2x+c$

12. $-\frac{1}{2}x^2e^{-x^2}-\frac{1}{2}e^{-x^2}+c$ 13. $\frac{1}{2}x^2\sin(x^2)+\frac{1}{2}\cos(x^2)+c$ 14. $\frac{x2^x}{\ln 2}-\frac{2^x}{(\ln 2)^2}+c$

15. $x\arccos x-\sqrt{1-x^2}+c$ 16. $x(\ln x)^2 - 2x\ln x + 2x+c$ 17. $\frac{1}{4}\arctan(\frac{x-3}{4})+c$

18. $\frac{2}{3\ln 7}(1+7^x)^{3/2}+c$ 19. $\frac{1}{2}x^2\ln x-\frac{1}{4}x^2+c$ 20. $-\sqrt{-x^2-4x}+c$

21. $2x+8\ln\left|x-4\right|+c$ 22. $\sqrt{x^2+2x-4}+c$ 23. $ln|x^2+2x+5|-\frac{5}{2}\arctan\left(\frac{x+1}{2}\right)+c$