1. Evaluate $\int e^{\tan^{-1}x}\left(\dfrac{1+x+x^2}{1+x^2}\right)dx$

2. Evaluate $\int \dfrac{x^3}{x^4+3x^2+2}dx$

3. Evaluate $\int \dfrac{x}{\sqrt{x}+1}dx$

4. Evaluate $\int \sqrt{\dfrac{a+x}{a-x}}dx$

5. Evaluate $\int \dfrac{\sin x - x\cos x}{x(x+\sin x)}dx$

6. Evaluate $\int \dfrac{x^{\frac{1}{2}}}{1+x^{\frac{3}{4}}}dx$

7. Evaluate $\int \dfrac{x^2}{1+x^4}dx$

8. Evaluate $\int \sqrt{\tan x}\,dx$

9. Evaluate $\int \dfrac{\sin x - \cos x}{16\sin 2x + 25}$

10. Evaluate $\int \ln\left(x+\sqrt{x}\right)dx$

11. Evaluate $\int \sqrt{\sec x - 1}\,dx$

12. Evaluate $\int \dfrac{\cos x}{1+\cos x}dx$

13. Evaluate $\int \sqrt{x}\ln\sqrt{x}\,dx$

14. Evaluate $\int \dfrac{x^2}{\sqrt{2x-x^2}}dx$

15. Evaluate $\int \dfrac{1}{x^2\sqrt{x^2+4}}dx$

16. Evaluate $\int \sin(\ln x)dx$

17. Evaluate $\int \dfrac{\ln\tan x}{\sin x.\cos x}dx$

18. Evaluate $\int \dfrac{\ln\left(x^2\right)}{x}dx$

19. Evaluate $\int x\cos(\ln x)dx$

20. Evaluate $\int x^x.(1+\ln x)dx$