14) $u = \cot x$

$du = -\csc^2 x\,dx$

$\int u^{1/2}\,du$

15) $u = \cos x$

$du = -\sin x\,dx$

$-\int \sec^2 u\,du$

$-\tan(\cos x) + C$

16) $u = \ln x$

$du = \frac{1}{x}\,dx$

$\int \frac{1}{u}\,du$

17) $\int \frac{\cos x}{\sin x}\,dx$

$u = \sin x$

$du = \cos x\,dx$

$\int \frac{1}{u}\,du$

18) $\frac{e^{x^{-1}}}{x^2} = e^{x^{-1}} \cdot x^{-2}\,dx$

$u = x^{-1}$

$du = -1x^{-2}\,dx$

$-du = \frac{1}{x^2}\,dx$

$-\int e^u\,du$

19) $u = \tan^{-1} x$

$du = \frac{1}{1+x^2}\,dx$

$\int u\,du$

$\frac{u^2}{2} + C$

$\int \frac{\tan^{-1} x}{1+x^2}\,dx$

20) $\int x^5 \sqrt[3]{x^3+1}\,dx$

$u = x^3 + 1 \qquad x^3 = u - 1$

$du = 3x^2\,dx$

$\frac{1}{3}\,du = x^2\,dx$

$\frac{1}{3}\int (u-1)\cdot u^{1/3}\,du$

$\frac{1}{3}\,u^{4/3} - u^{1/3}\,du$

$\frac{1}{3}\cdot\frac{3}{7}u^{7/3} - \frac{1}{3}\cdot\frac{3}{4}u^{4/3} + C$