$$\int x^2 \log(x)\,dx = \frac{x^3}{3}\log(x) - \frac{x^3}{9}$$

$$\int \sqrt{2x+3}\,dx = \frac{1}{3}\left(2x+3\right)^{3/2}$$

$$\int \frac{x+1}{x^2+x-2}\,dx = \frac{2}{3}\log(x-1) + \frac{1}{3}\log(x+2)$$

$$\int \frac{(x+1)(x+2)(x+3)}{x}\,dx = \frac{x^3}{3} + 3x^2 + 11x + 6\log(x)$$

$$\int x^2\left(e^{x^3-1} - x^2\right)\,dx = \frac{1}{2}e^{x^3-1} - \frac{x^5}{5}$$

$$\int x^2\sin(x)\,dx = -x^2\cos(x) + 2x\sin(x) + 2\cos(x)$$

$$\int \frac{x}{x-1}\,dx = x + \log(x-1)$$

$$\int \frac{e^x}{e^{2x}+1}\,dx = \arctan(e^x)$$

$$\int \sin(x)\cos^2(x)\,dx = -\frac{1}{3}\cos^3(x) = -\frac{1}{4}\cos(x) - \frac{1}{12}\cos(3x)$$

$$\int \frac{\cos(\log(x))}{x}\,dx = \sin(\log(x))$$

$$\int \frac{2x^3}{x^2-1}\,dx = x^2 + \log(x^2-1)$$

$$\int x\sqrt{x+3}\,dx = \frac{2}{5}(x-2)\left(x+3\right)^{3/2}$$

$$\int \frac{\sec^2(x)}{e^{2\tan(x)}}\,dx = -\frac{1}{2}e^{-2\tan(x)}$$

$$\int \sin^2(x)\,dx = \frac{x}{2} - \frac{1}{2}\sin(x)\cos(x) = \frac{x}{2} - \frac{1}{4}\sin^2(x)$$

$$\int \frac{1}{x^4-x^2}\,dx = \frac{1}{x} + \frac{1}{2}\log(x-1) - \frac{1}{2}\log(x+1)$$

$$\int e^x(\sin(x)+\cos(x))\,dx = e^x\sin(x)$$

$$\int 2x\arctan(x)\,dx = x^2\arctan(x) - x + \arctan(x)$$

$$\int \frac{e^x - e^{-x}}{e^x + e^{-x}}\,dx = \log(e^x + e^{-x}) = \log(e^{2x}+1) - x$$

$$\int x\log\left(x^2\right)\,dx = \frac{x^2}{2}\log\left(x^2\right) - \frac{x^2}{2}$$

$$\int \left(\cos^2(x) - \sin^2(x)\right)\,dx = \cos(x)\sin(x) = \frac{1}{2}\sin(2x)$$

$$\int (6x^2+2)\left(2x^3+2x\right)^2\,dx = \frac{1}{3}\left(2x^3+2x\right)^3$$

$$\int \log(x)^2\,dx = x\log(x)^2 - 2x\log(x) + 2x$$

$$\int \frac{x+1}{(x+2)(x+3)(x+4)}\,dx = -\frac{1}{2}\log(x+2) + 2\log(x+3) - \frac{3}{2}\log(x+4)$$

$$\int x^3e^{2x}\,dx = \frac{1}{2}x^3e^{2x} - \frac{3}{4}x^2e^{2x} + \frac{3}{4}xe^{2x} - \frac{3}{8}e^{2x}$$

$$
\begin{aligned}
\int \frac{1}{x^4-1}\,dx &= \frac{1}{4}\log(x-1) - \frac{1}{4}\log(x+1) - \frac{1}{2}\arctan(x) \\
\int \frac{\sqrt{\sqrt{x}+1}}{\sqrt{x}}\,dx &= \frac{4}{3}\left(\sqrt{x}+1\right)^{3/2} \\
\int \frac{x}{x^3-2x^2-x+2}\,dx &= -\frac{1}{2}\log(x-1) + \frac{2}{3}\log(x-2) - \frac{1}{6}\log(x+1) \\
\int \frac{1}{e^x+1}\,dx &= x - \log(e^x+1) \\
\int \frac{1}{x\log(x)\log(\log(x))}\,dx &= \log(\log(\log(x))) \\
\int e^{\sqrt{x}}\,dx &= 2\left(\sqrt{x}-1\right)e^{\sqrt{x}} \\
\int \frac{\log(x^2)}{x}\,dx &= \frac{1}{4}\left(\log\left(x^2\right)\right)^2 \\
\int \frac{2x+6}{x^2+3x+2}\,dx &= 4\log(x+1) - 2\log(x+2) \\
\int (\cos(x) + 2\sin(2x))\sin(x)\,dx &= \frac{4}{3}\sin^3(x) - \frac{1}{2}\cos^2(x) \\
\int e^{3x}\sqrt{e^{3x}-5}\,dx &= \frac{2}{9}\left(e^{3x}-5\right)^{3/2} \\
\int \frac{1}{\sqrt{x}-x}\,dx &= -2\log(1-\sqrt{x}) \\
\int \frac{\log(x)+1}{x\log(x)}\,dx &= \log(x\log(x)) = \log(x) + \log(\log(x)) \\
\int \left(2\log(x) + (\log(x))^2\right)\,dx &= x\left(\log(x)\right)^2 \\
\int x^5 e^{x^2}\,dx &= \frac{1}{2}\left(x^4-2x^2+2\right)e^{x^2} \\
\int x^2\log\left(x^2\right)\,dx &= \frac{2}{3}x^3\log(x) - \frac{2}{9}x^3 \\
\int \frac{1}{\cos(x)\sin(x)}\,dx &= \log(\tan(x)) = \log(\sin(x)) - \log(\cos(x))
\end{aligned}
$$