

$$\int \frac{dx}{\sqrt{a^2 + x^2}} = \operatorname{arg\,sinh} \frac{x}{a} = \ln(x + \sqrt{a^2 + x^2})$$

$$\int \frac{x dx}{\sqrt{a^2 + x^2}} = \sqrt{a^2 + x^2}$$

$$\int \frac{x^2 dx}{\sqrt{a^2 + x^2}} = \frac{x}{2} \sqrt{a^2 + x^2} - \frac{a^2}{2} \ln(x + \sqrt{a^2 + x^2})$$

$$\int \frac{x^3 dx}{\sqrt{a^2 + x^2}} = \frac{[a^2 + x^2]^{3/2}}{3} - a^2 \sqrt{a^2 + x^2}$$

$$\int \frac{dx}{x\sqrt{a^2 + x^2}} = -\frac{1}{a} \ln \frac{a + \sqrt{a^2 + x^2}}{x}$$

$$\int \frac{dx}{[a^2 + x^2]^{3/2}} = \frac{x}{a^2 \sqrt{a^2 + x^2}}$$

$$\int \frac{x dx}{[a^2 + x^2]^{3/2}} = -\frac{1}{\sqrt{a^2 + x^2}}$$

$$\int \frac{x^2 dx}{[a^2 + x^2]^{3/2}} = -\frac{x}{\sqrt{a^2 + x^2}} + \ln(x + \sqrt{a^2 + x^2})$$

$$\int \frac{x^3 dx}{[a^2 + x^2]^{3/2}} = \sqrt{a^2 + x^2} + \frac{a^2}{\sqrt{a^2 + x^2}}$$