

$$\int \sinh^2 x \cosh x \, dx = \frac{\sinh^3 x}{3}.$$

$$\int \sinh^2 x \cosh^2 x \, dx = \frac{\sinh 4x}{32} - \frac{x}{8}.$$

$$\int \sinh^3 x \cosh x \, dx = \frac{\sinh^4 x}{4}.$$

$$\int \sinh^p x \cosh x \, dx = \frac{\sinh^{p+1} x}{p+1}, \quad [p \neq -1].$$

$$\int \frac{dx}{\sinh x \cosh x} = \log |\tanh x|.$$

$$\int \frac{dx}{\sinh x \cosh^2 x} = \frac{1}{\cosh x} + \log \left| \tanh \frac{x}{2} \right|.$$

$$\int \frac{dx}{\sinh x \cosh^3 x} = \frac{1}{2 \cosh^2 x} + \log |\tanh x|.$$

$$\int \frac{dx}{\sinh x \cosh^p x} = \frac{1}{(p-1) \cosh^{p-1} x} \quad [p \neq 1].$$

$$+ \int \frac{dx}{\sinh x \cosh^{p-2} x},$$

$$\int \frac{dx}{\sinh^2 x \cosh x} = -\frac{1}{\sinh x} - \tan^{-1}(\sinh x).$$

$$\int \frac{dx}{\sinh^2 x \cosh^2 x} = -2 \operatorname{ctnh} 2x.$$

$$\int \frac{dx}{\sinh^3 x \cosh x} = -\frac{1}{2 \sinh^2 x} - \log |\tanh x|.$$

$$\int \frac{dx}{\sinh^p x \cosh x} = -\frac{1}{(p-1) \sinh^{p-1} x}$$

$$- \int \frac{dx}{\sinh^{p-2} x \cosh x}, \quad [p \neq 1].$$

$$\int \frac{\sinh x \, dx}{\cosh x} = \int \tanh x \, dx = \log \cosh x.$$

$$\int \frac{\sinh x \, dx}{\cosh^2 x} = -\frac{1}{\cosh x} = -\operatorname{sech} x.$$

$$\int \frac{\sinh x \, dx}{\cosh^3 x} = -\frac{1}{2 \cosh^2 x} = \frac{\tanh^2 x}{2} + \text{constant}.$$

$$\int \frac{\sinh x \, dx}{\cosh^p x} = -\frac{1}{(p-1) \cosh^{p-1} x}, \quad [p \neq 1].$$

$$\int \frac{\sinh^2 x}{\cosh x} \, dx = \sinh x - \tan^{-1}(\sinh x).$$

$$\int \frac{\sinh^2 x}{\cosh^2 x} \, dx = \int \tanh^2 x = x - \tanh x.$$

$$\int \frac{\sinh^2 x}{\cosh^p x} \, dx = -\frac{\sinh x}{(p-1) \cosh^{p-1} x}$$

$$+ \frac{1}{p-1} \int \frac{dx}{\cosh^{p-2} x}, \quad [p \neq 1].$$

$$\int \frac{\sinh^2 x}{\cosh x} \, dx = \frac{\sinh^2 x}{2} - \log \cosh x.$$

$$\int \frac{\sinh^3 x}{\cosh^2 x} \, dx = \cosh x + \operatorname{sech} x.$$

$$\int \frac{\sinh^3 x}{\cosh^3 x} \, dx = \int \tanh^3 x \, dx = -\frac{\tanh^2 x}{2} + \log \cosh x.$$

$$\int \frac{\sinh^3 x}{\cosh^4 x} \, dx = \frac{1}{3 \cosh^3 x} - \frac{1}{\cosh x}.$$

$$\int \frac{\sinh^3 x}{\cosh^p x} \, dx = \frac{1}{(p-1) \cosh^{p-1} x} - \frac{1}{(p-3) \cosh^{p-3} x},$$

$$[p \neq 1 \text{ or } 3].$$

$$\int \frac{\sinh^{p-2} x}{\cosh^p x} \, dx = \frac{\tanh^{p-1} x}{p-1}, \quad [p \neq 1].$$

$$\int \frac{\cosh x}{\sinh x} \, dx = \int \operatorname{ctnh} x \, dx = \log |\sinh x|.$$

$$\int \frac{\cosh x}{\sinh^2 x} \, dx = -\frac{1}{\sinh x} = -\operatorname{csch} x.$$

$$\int \frac{\cosh x}{\sinh^3 x} \, dx = -\frac{1}{2 \sinh^2 x} = -\frac{\operatorname{ctnh}^2 x}{2} + \text{constant}.$$