1. $\int \sinh 3x \ dx$

2. $\int \tanh^3 3x \ \text{sech}^2 3x \ dx$

3. $\int \tanh x \ dx$

4. $\int (\tanh 2x)(\text{sech} 2x) \ dx$

5. $\int (\cosh^5 x)(\sinh x) \ dx$

6. $\int \sqrt{x^2 - 1} \ dx$

7. $\int \frac{\tanh^{-1} x}{x^2 - 1} \ dx$

8. $\int \sinh^{-1} x \ dx$

Answers

1. $\frac{1}{3}\cosh(3x) + C$

2. $\frac{(\tanh 3x)^4}{12} + C$

3. $\ln|\cosh x| + C$

4. $-\frac{\operatorname{sech}2x}{2} + C$

5. $\frac{\cosh^6 x}{6} + C$

6. $\frac{1}{2}x\sqrt{x^2 - 1} - \frac{1}{2}\cosh^{-1}x + C$

7. $-\frac{1}{2}(\tanh^{-1}x)^2 + C$

8. $x\sinh^{-1}x - \sqrt{1 + x^2} + C$