Inverse and Hyperbolic Trig - Integration

July 6, 2020

1. Find $\displaystyle\int \sinh(x)(\cosh(x))^2 \ dx$

2. Find $\displaystyle\int \frac{\operatorname{csch}^2(\sqrt{x})}{\sqrt{x}} \ dx$

3. Find $\displaystyle\int \frac{e^x}{\sqrt{1 - e^{2x}}} \ dx$

4. Find $\displaystyle\int_0^1 \frac{\cosh(2x)}{3+\sinh(2x)}\,dx$

5. Find $\displaystyle\int \frac{1}{9+4x^2}\,dx$

6. Find $\displaystyle\int \frac{1}{2x\sqrt{1-9x^2}}\,dx$

7. Find $\displaystyle\int \frac{1}{\sqrt{x^2+2x+5}}\,dx$