

Antiderivatives 3

Find the indicated antiderivative. Check your answers.

1. $\int \frac{(\tan^{-1} x)^3}{x^2 + 1} dx$

2. $\int \frac{4x}{x^2 + 1} dx$

3. $\int \frac{4x}{(x^2 + 1)^2} dx$

4. $\int \frac{5}{x^2 + 1} dx$

5. $\int \frac{4x + 5}{x^2 + 1} dx$

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

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

$$8. \int \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx =$$

$$9. \int \frac{3}{\sqrt{1-x^2}} dx =$$

$$10. \int \frac{x-3}{\sqrt{1-x^2}} dx =$$