

1. $\int (2x+3)(x^2+3x+5)^6 \, dx =$

2. $\int (3x^2+1)(x^3+x+1)^3 \, dx =$

3. $\int \frac{2x+3}{\sqrt{x^2+3x+5}} \, dx =$

4. $\int \frac{3x^2+1}{\sqrt{x^3+x+1}} \, dx =$

5. $\int \frac{2x+3}{\sqrt[3]{x^2+3x+5}} \, dx =$

6. $\int \frac{3x^2+1}{\sqrt[5]{x^3+x+1}} \, dx =$