

1. $\int (5x^2 + \cos x \sin x) dx$

3. $\int \frac{4^x}{\ln 16} dx$

2. $\int \frac{16}{x\sqrt{(4x)^2 - 1}} dx$

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

5. $\int \cos^2\left(\frac{x}{3}\right) dx$

7. $\int \sqrt{x+1} (3x+4) dx$

6. $\int_5^6 \frac{3x-7}{(6x^2-28x)^2} dx$

8. $\int (3x+1)^2 e^{3x} dx$