

1.

$$\int \left(x^{100} + \frac{\sqrt{x} - x^{3/2}}{x} \right) dx$$

2.

$$\int \tan x \sec^3 x \, dx$$

3.

$$\int x e^{3x} \, dx$$

4.

$$\int \frac{100}{x^2 - 1} dx$$

5.

$$\int \frac{10}{\sqrt{10 - 100x^2}} dx$$

6.

$$\int \frac{2x^2 + 6x + 6}{(x^2 + 1)(3x + 2)} dx$$

7.

$$\int_0^1 \frac{6x}{(x^2 + 1)^5} dx$$

8.

$$\int x^2 \cos x \, dx$$

9.

$$\int_1^{\infty} \frac{2}{(x+1)^{3/2}} dx$$

10.

$$\int_1^2 \frac{1}{(x-1)^{1/2}} dx$$