The Substitution rule

Having how learned the substitution rule let us apply if to some problems:

1.

$$\int x^2 e^{x^3}\mathrm{d}x$$

2.

$$\int (1-2x)^9\mathrm{d}x$$

3.

$$\int \frac{(\ln(x))^2}{x}\mathrm{d}x$$

4.

$$\int \sec^2(x)\cdot\tan^3(x)\mathrm{d}x$$

5.

$$\int \sin(\pi t)\mathrm{d}t$$

6.

$$\int \frac{\sin(\ln(t))}{t}\mathrm{d}t$$

7.

$$\int \frac{e^{\frac{1}{x}}}{x^2}\mathrm{d}x$$

8.

$$\int x^5\sqrt{(1+x^2)}\mathrm{d}x$$