

$$(2) \int \frac{1-e^{4x}}{e^x+1} dx = \int \frac{(1-e^{2x})(1+e^{2x})}{e^x+1} dx = \int \frac{(1-e^x)(1+e^x)(1+e^{2x})}{e^x+1} dx =$$

$$\int (1+e^{2x}-e^x-e^{3x}) dx = x + \frac{1}{2}e^{2x} - e^x - \frac{1}{3}e^{3x} + C$$