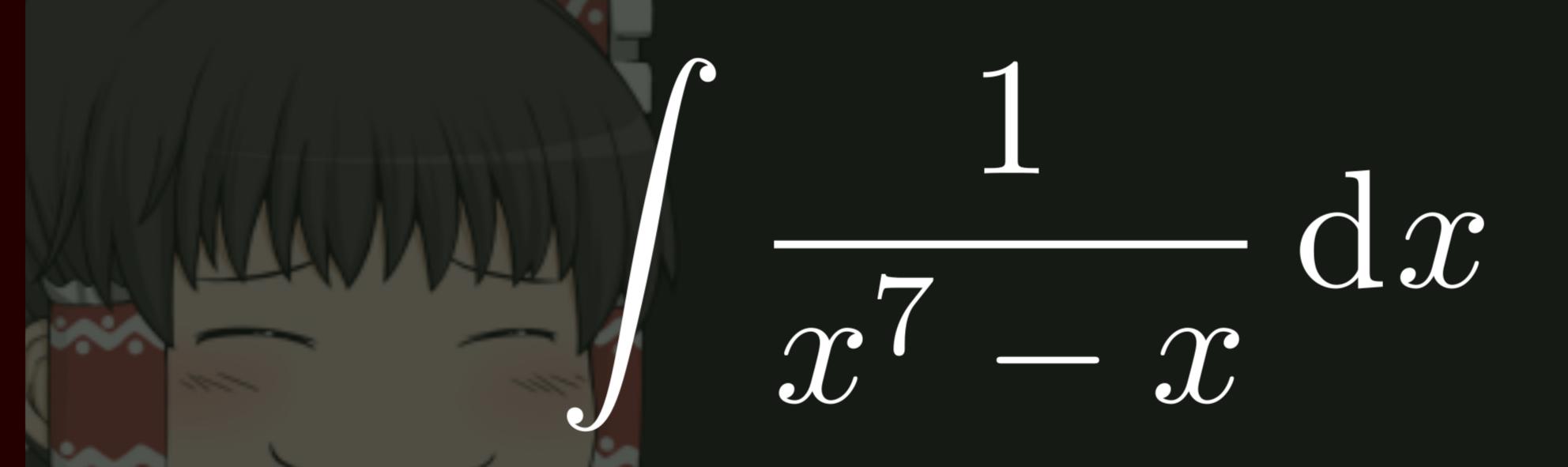
次の積分を計算せよ。



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$$\int \frac{1}{x^7 - x} \, \mathrm{d}x$$

解答

$$\int \frac{1}{x^7 - x} dx = \frac{1}{6} \int \frac{6x^{-7}}{1 - x^{-6}} dx$$
$$= \frac{1}{6} \int \frac{1}{1 - x^{-6}} d(1 - x^{-6})$$
$$= \frac{1}{6} \ln|1 - x^{-6}| + C$$

<u>結論</u>

$$\int \frac{1}{x^7 - x} \, \mathrm{d}x = \frac{1}{6} \ln |1 - x^{-6}| + C$$