⑨

a) $2^{11} \cdots 2^0 \, 2^{-1} \cdots 2^{-12}$

max $11 \cdots 1$

$2^{11} + 2^{10} + \cdots + 2^{-12} =$

$= \left(2^{11} + 2^{10} \cdots + 2^0\right) + \left(\left(\frac{1}{2}\right)^1 + \left(\frac{1}{2}\right)^2 + \cdots + \left(\frac{1}{2}\right)^{12}\right) =$

$=$

$= 4095 \dfrac{4095}{4096}$