

1 次を証明せよ.

$$(1) \sinh(x + y) = \sinh x \cosh y + \cosh x \sinh y$$

$$(2) \sinh(x - y) = \sinh x \cosh y - \cosh x \sinh y$$

$$(3) \tanh(x \pm y) = \frac{\tanh x \pm \tanh y}{1 \pm \tanh x \tanh y} \quad (\text{複合同順})$$

2 次を証明せよ.

$$(1) 1 - \tanh^2 x = \frac{1}{\cosh^2 x}$$

$$(2) \cosh \frac{x}{2} = \sqrt{\frac{1 + \cosh x}{2}}$$

$$(3) \cosh A + \cosh B = 2 \cosh \frac{A + B}{2} \cosh \frac{A - B}{2}$$