

4.21 Relations to Hyperbolic Functions

Imaginary unit: i

$$508. \quad \sin(ix) = i \sinh x$$

$$509. \quad \tan(ix) = i \tanh x$$

$$510. \quad \cot(ix) = -i \coth x$$

$$511. \quad \sec(ix) = \operatorname{sech} x$$

$$512. \quad \csc(ix) = -i \operatorname{csch} x$$