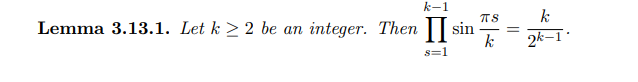
Gauss’s Multiplication Formula

Property



Let be an integer.

=

Proof:

The proof of Gauss’s Multiplication Formula is from:

[Gauss Multiplication Formula - ProofWiki](https://proofwiki.org/wiki/Gauss_Multiplication_Formula)

=

=

=

=

=

Taking the product for to , we have that

=

(by above claim)

=

(by the property of limit about product)

=

where

A =

B =

C =

=

where

D =

=

where

E =

=

where

F =

(by putting D to each term)

=