Artifact 1 (Sample Responses)

On a piece of notebook paper, prove the following identities.

# Part A

Find the identity for .





Artifact 2 (Sample Responses)

On a piece of notebook paper, prove the following identities.

# Part B

Find the identity for .



# Part C

Find the identity for .



# Part D

Find the identity for .



Artifact 3 (Sample Responses)

On a piece of notebook paper, prove the following identities.

# Part E

Find the identity for .



# Part F

Find the identity for .



# Part F: Challenge

Write two other identities for  using what you know.



