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CS3C Examples:

import math

# Example: factorial

n = 5

result = math.factorial(n)

print(f"The factorial of {n} is: {result}")

# Example: power and logarithmic function

x = 2

y = 3

# Power function: x raised to the power y

power\_result = math.pow(x, y)

# Logarithmic function: base 10 logarithm of x

log\_result = math.log10(x)

print(f"{x} raised to the power {y} is: {power\_result}")

print(f"Logarithm of {x} with base 10 is: {log\_result}")

# Example: sine function

angle\_degrees = 45

# Convert degrees to radians

angle\_radians = math.radians(angle\_degrees)

# Sine function

sin\_result = math.sin(angle\_radians)

print(f"The sine of {angle\_degrees} degrees is: {sin\_result}")

# Example: radians to degrees conversion

angle\_radians = math.pi / 4

# Convert radians to degrees

angle\_degrees = math.degrees(angle\_radians)

print(f"{angle\_radians} radians is equal to {angle\_degrees} degrees.")

# Example: hyperbolic sine function

x = 2

# Hyperbolic sine function

sinh\_result = math.sinh(x)

print(f"The hyperbolic sine of {x} is: {sinh\_result}")