The `math` module in Python provides a set of mathematical operations and functions. It includes functions for basic arithmetic operations, trigonometry, logarithmic and exponential functions, and more. Here are some key aspects of the `math` module with examples:

Basic Arithmetic Operations:

```python
import math

# Addition
result_add = math.add(4, 5)

# Subtraction
result_sub = math.subtract(9, 3)

# Multiplication
result_mul = math.multiply(3, 7)

# Division
result_div = math.divide(8, 2)

print("Addition:", result_add)
print("Subtraction:", result_sub)
print("Multiplication:", result_mul)
print("Division:", result_div)
```

Trigonometric Functions:

```python
import math

angle_rad = math.radians(45)  # Convert degrees to radians

# Sine
sin_result = math.sin(angle_rad)

# Cosine
cos_result = math.cos(angle_rad)

# Tangent
tan_result = math.tan(angle_rad)

print("Sine:", sin_result)
print("Cosine:", cos_result)
print("Tangent:", tan_result)
```

Logarithmic and Exponential Functions:

```python
import math

# Logarithm base 10
log10_result = math.log10(100)

# Natural logarithm (base e)
log_result = math.log(math.e ** 3)

# Exponential function (e ** x)
exp_result = math.exp(2)

print("Logarithm base 10:", log10_result)
print("Natural Logarithm:", log_result)
print("Exponential Function:", exp_result)
```

Power and Square Root:

```python
import math

# Power
power_result = math.pow(2, 3)  # 2 raised to the power of 3

# Square root
sqrt_result = math.sqrt(25)

print("Power:", power_result)
print("Square Root:", sqrt_result)
```

Constants:

The `math` module also provides some mathematical constants:

```python
import math

print("Pi:", math.pi)
print("Euler's Number:", math.e)
```

These examples cover just a subset of the functionality provided by the `math` module. The module is extensive and useful for a wide range of mathematical computations. Always refer to the official Python documentation for the `math` module for a complete list of functions and details: [math — Mathematical functions](https://docs.python.org/3/library/math.html).