1. **NUnit Handson**

**MathLibrary.cs**

using System;

namespace CalcLibrary

{

interface IMathLibrary

{

double Addition(double a, double b);

double Subtraction(double a, double b);

double Multiplication(double a, double b);

double Division(double a, double b);

}

public class SimpleCalculator : IMathLibrary

{

double result = 0;

public double Addition(double a, double b)

{

result = a + b;

return result;

}

public double Subtraction(double a, double b)

{

result = a - b;

return result;

}

public double Multiplication(double a, double b)

{

result = a \* b;

return result;

}

public double Division(double a, double b)

{

if (b == 0)

throw new ArgumentException("Second Parameter Can't be Zero");

result = a / b;

return result;

}

public void AllClear()

{

result = 0;

}

public double GetResult

{

get { return result; }

}

}

}

**SimpleCalculatorTests.cs**

using NUnit.Framework;

using System;

namespace CalcLibrary.Tests

{

[TestFixture]

public class SimpleCalculatorTests

{

private SimpleCalculator \_calculator;

[SetUp]

public void SetUp()

{

\_calculator = new SimpleCalculator();

}

[TearDown]

public void TearDown()

{

\_calculator.AllClear();

}

[Test]

[TestCase(5, 3, 8)]

[TestCase(-1, -1, -2)]

[TestCase(0, 0, 0)]

public void Addition\_ShouldReturnCorrectSum(double a, double b, double expected)

{

var result = \_calculator.Addition(a, b);

Assert.That(result, Is.EqualTo(expected));

}

// Add other test methods as in your original code...

}

}

