

# Unit Testing In-Class Exercise

Given the Circle class implementation, work in groups to write unit tests for the following two member functions:

- `double area() const;`
- `double perimeter() const;`

# In-Class Exercise (cont'd)

```
//circle.hpp
#ifndef CIRCLE_HPP
#define CIRCLE_HPP

class Circle {
    private:
        double radius;
    public:
        Circle(double radius):radius(radius) {}
        double area() const;
        double perimeter()const;
};
#endif /*CIRCLE_HPP*/
```

```
//circle.cpp
#include "../header/circle.hpp"

#include <cmath>

double Circle::area() const {
    return M_PI * radius * radius;
}

double Circle::perimeter() const {
    return 2 * M_PI * radius;
}
```

# Review: Unit Test Example

```
TEST(Addition, CanAddTwoNumbers)
{
    int val1=2, val2=2;
    int res = add(val1,val2);

    EXPECT_TRUE(res == 4);
    ASSERT_EQ(res,4);
}
```