

//Answer to question #40063, Programming, C++
//write a program that converts objects of one class to objects of another class.assume
one class is to be degree and another to be radian

```
#include <iostream>
#define _USE_MATH_DEFINES
#include <math.h>
const double DEG_TO_RAD = 2 * M_PI / 360.0;
const double RAD_TO_DEG = 1. / DEG_TO_RAD;

class Radian;
class Degree
{
public:
    Degree(){};
    Degree(double angle) { value = angle; };
    Radian toRadian();
    double getValue() { return value; }
private:
    double value;
};

class Radian
{
public:
    Radian(){};
    Radian(double angle) { value = angle; };
    Degree toDegree();
    double getValue() { return value; }
private:
    double value;
};

Degree Radian::toDegree()
{
    return Degree(value * RAD_TO_DEG);
}
Radian Degree::toRadian()
{
    return Radian(value * DEG_TO_RAD);
}

int main(int argc, char* argv[])
{
    std::cout << "Test" << std::endl;
    Degree deg;
    deg = Degree(45);
    Radian rad = Radian(M_PI / 2);
    std::cout << deg.getValue() << std::endl;
    std::cout << deg.toRadian().getValue() << std::endl;
    std::cout << rad.getValue() << std::endl;
    std::cout << rad.toDegree().getValue() << std::endl;
    return 0;
}
```