

## SquareEquationSolver

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# Chapter 1

## File Index

### 1.1 File List

Here is a list of all files with brief descriptions:

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## Chapter 2

# File Documentation

## 2.1 main.cpp File Reference

```
#include <iostream>
#include "SquareSolver.h"
```

### Functions

- int `main` ()

### 2.1.1 Function Documentation

#### 2.1.1.1 `main()`

```
int main ( )
```

## 2.2 run\_tests.cpp File Reference

```
#include "SquareSolver.h"
#include <functional>
#include <iostream>
```

### Macros

- `#define __ABC(a, b, c)` "a = " << (a) << ", b = " << (b) << ", c = " << (c) << "."
- `#define __PAIR(x, y)` "(" << x << ", " << y << ")"

## Functions

- bool [pair\\_match](#) (int n, double a, double b, double x, double y)
- void [test](#) (std::function< int(double, double, double, double \*, double \*)> f, double a, double b, double c, int expNRoots, double exp\_x1, double exp\_x2)
- int [main](#) ()

### 2.2.1 Macro Definition Documentation

#### 2.2.1.1 \_\_ABC

```
#define __ABC(  
    a,  
    b,  
    c ) "a = " << (a) << ", b = " << (b) << ", c = " << (c) << "."
```

#### 2.2.1.2 \_\_PAIR

```
#define __PAIR(  
    x,  
    y ) "(" << x << ", " << y << ")"
```

### 2.2.2 Function Documentation

#### 2.2.2.1 main()

```
int main ( )
```

#### 2.2.2.2 pair\_match()

```
bool pair_match (  
    int n,  
    double a,  
    double b,  
    double x,  
    double y )
```



### 2.2.2.3 test()

```
void test (
    std::function< int(double, double, double, double *, double *)> f,
    double a,
    double b,
    double c,
    int expNRoots,
    double exp_x1,
    double exp_x2 )
```

## 2.3 SquareSolver.h File Reference

```
#include <cmath>
```

### Enumerations

- enum { [SQ\\_INF\\_ROOTS](#) = 100500 }

### Functions

- bool [isZero](#) (double a)
- int [solveSquareEquation](#) (double a, double b, double c, double \*x1, double \*x2)

### Variables

- const double [EPS](#) = 1e-7

## 2.3.1 Enumeration Type Documentation

### 2.3.1.1 anonymous enum

```
anonymous enum
```

Enumerator

<a href="#">SQ_INF_ROOTS</a>	
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## 2.3.2 Function Documentation

### 2.3.2.1 isZero()

```
bool isZero (  
    double a )
```

### 2.3.2.2 solveSquareEquation()

```
int solveSquareEquation (  
    double a,  
    double b,  
    double c,  
    double * x1,  
    double * x2 )
```

## 2.3.3 Variable Documentation

### 2.3.3.1 EPS

```
const double EPS = 1e-7
```

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