!!public static void main(String [] args) {}

// to print a boolean array

**public static void printArr(boolean[] arr) {**

**for (int i = 0; i < arr.length; i++) {**

**System.out.println(i + ": " + arr[i] + ", ");**

**}**

**System.out.println();**

**}**

**public static void main(String[] args) {**

**System.out.println();**

**Boolean[] arr1 = new boolean[]{true, false, false, true, false};**

**printArr(arr1);**

**}**

## Procedure vs Function

**Procedure:** void

- just to send Variables

- typical use for print

**Function:** <variableType>

- to return a variable from the function

- typical use for return

## Return

**Push Variable to Extra Method**

**main {**

**methodName(Indentifiers1, Identifiers2, …)**

**}**

**Push Variable to Main Method**

**methodName(Indentifiers1, Identifiers2, …) {**

**return Literal/Value;** // to return directly a Value

**return Identifiers/variableName;** // to return Variable

**return new variableType[] {Value1, Value2, V...};**  // to return Arrays

**}**

**Pull Variable from extra Method**

**main {**

**variableType variableName = mathodName(Indentifiers1, Identifiers2, …)**

**}**

**public static int test(int a, int b) {**

**int r = a + b;**

**return r;** // Push Function into main

**}**

**public static void main(String[] args){**

**int result = test(5, 7);** // Push Value into 2. Method, and Pull the variable

**System.out.println(result);**

**}**

**double length = vectorLength(variableName);**

**System.out.println("\nLänge: " + length);**

or

**System.out.println("\nLänge: " + vectorLength(variableName));**

## Example:

double[] abcF(int a, b, c) {

double x1 = -b + \* (Math.sqrt(Math.pow(-b, 2) - 4 \* a \* c));

double x2 = -b - \* (Math.sqrt(Math.pow(-b, 2) - 4 \* a \* c));

x1 /= 2 \* a;

x2 /= 2 \* a;

double[] abcFResult = new double[] {x1, x2};

return abcFResult;

}

double[] pqF(int p, q) {

double x1 = -(p / 2) + Math.sqrt(Math.pow(p/2, 2) - q);

double x2 = -(p / 2) + Math.sqrt(Math.pow(p/2, 2) - q);

return new double[] {x1, x2};

}

double[] calculateX(int[] nx) {

if (nx.length == 3) {

double[] result = abcF(nx[0], nx[1], nx[2]);

return result;

} else if (nx.length == 2) {

double[] result = pqF(nx[0], nx[1]);

return result;

} else {

return new double[] {};

}

}

## Check

boolean Week(int input){...}

**String nameWeek(int numWeek) {**

**if (numWeek == 0) return "mon"**

**if (numWeek == 1) return "tue"**

**if (numWeek == 2) return "wed"**

**if (numWeek == 3) return "thu"**

**if (numWeek == 4) return "fri"**

**if (numWeek == 5) return "sat"**

**if (numWeek == 6) return "sun"**

**}**

**nameWeek(0) == “mon”**

**nameWeek(5) == “sat”**