What is a class? (finally!)

- First 2 weeks: Container for the Java code of an application (“App”).
- Next weeks: A way to extend an object (like a Turtle, Picture, or Sudoku)
  BY ADDING YOUR OWN METHODS TO IT,
  (like putting them in ArtisticTurtle, KeyablePicture, CheckableSudoku)

- NOW: A class is a blueprint for making objects.
- truth: The class is one of several Java features to organize complex software designs. [packages, jars, type parametrized classes,...]
The Mad Ph.D. Makes Objects Videoc

http://www.youtube.com/watch?v=1JJL0YszYik
What are the main points of the Mad Ph.D. Video? Fact: All 3 are true! Are any omitted from the video?

Point 1: A class definition is a blueprint to be followed when the new operator makes an object.

Point 2: Reference variables are needed to hold addresses of objects so the computer can locate them for processing.

Point 3: A class definition can add methods or potential behaviors to objects.

(A) Point 1 only.
(B) Points 1 and 2 only.
(C) Points 1, 2, and 3.
(D) Points 2 and 3 only.
(E) Points 1 and 3 only.
NOW: A class is a blueprint for making objects.

The Zen (way) of Object Oriented Programming (OOP)

Imagine or think: An object (each one) is a (separate) SOLID, REAL-WORLD THING, like a House, an Airplane, anything...that is LOCATED SOMEWHERE.

even though:

In truth: Each object is just a particular pattern of bits stored temporarily somewhere in a computer's memory. (except advanced: persistent objects)
public class House {
    String owner;

    public House(String pString) {
        this.owner = pString;
    }

    public String toString() {
        return("The House owned by " + this.owner);
    }
}

public class neighborhoodApp {
    public static void main(String[] a) {
        House madPhDsRef = new House("Mad Ph.D.");
        System.out.print("They just built ");
        System.out.println(madPhDsRef);

        House onHillRef = new House("Dr. Miomoto");
        System.out.print("They just built ");
        System.out.println(onHillRef);
    }
}
import java.util.Scanner;
public class IsNumberAMemberApp {
    public static boolean isNumInArray( int which, int[] array ) {
        boolean isAMember;
        //Write MyProgLab answer here:
        isAMember = false;
        for(int i=0; i < array.length; i = i + 1) {
            if (which == array[ i ]) {
                isAMember = true;
            }
        }
        return isAMember;
    }
    public static void main(String[] a) {
        int k;
        int[] currentMembers = new int[7];
        Scanner sc = new Scanner(System.in);
        for(int i=0; i<currentMembers.length; i = i + 1) {
            currentMembers[ i ] = sc.nextInt();
        }
        int memberId = 707;
        boolean answer;
        answer = isNumInArray(707, currentMembers);
        System.out.println( answer );
    }
}