

```
import java.util.Scanner;
```

```
import java.util.Arrays;
```

```
class Grades{
```

```
    public static void print_grades(int[] grades){
```

```
        // Convert the array of grades to string.
```

```
        String str = Arrays.toString(grades);
```

```
        // Remove the square brackets.
```

```
        String grades_str = str.substring(1, str.length()-1);
```

```
        // Add the curly brackets.
```

```
        System.out.println "{" + grades_str + " }";
```

```
    }
```

```
    public static int average_grades(int[] grades){
```

```
        int grade_sum = 0;
```

```
        // Iterate the array and find sum of the values.
```

```
        for(int i=0; i<grades.length; i++){
```

```
            grade_sum+=grades[i];
```

```
        }
```

```
        return grade_sum/grades.length;
```

```
    }
```

```
public static int grades_above_average(int[] grades){  
    int average_grade = average_grades(grades);  
    int count=0;  
    // Iterate the array and count the values above the average.  
    for(int i=0; i<grades.length; i++){  
        if(grades[i] > average_grade){  
            count++;  
        }  
    }  
  
    return count;  
}
```

```
public static int grades_below_average(int[] grades){  
    int average_grade = average_grades(grades);  
    int count=0;  
    // Iterate the array and count the values below the average.  
    for(int i=0; i<grades.length; i++){  
        if(grades[i] < average_grade){  
            count++;  
        }  
    }  
  
    return count;  
}
```

```

public static void grades_range(int[] grades){

    int min_grade = grades[0];
    int max_grade = grades[0];
    // Iterate the array to find the maximum and minimum grades.
    for(int i=0; i<grades.length; i++){
        if(grades[i] < min_grade)
            min_grade = grades[i];

        if(grades[i] > max_grade)
            max_grade = grades[i];
    }

    // Find the range by finding the difference between the maximum and
    minimum grades.

    int grade_range = max_grade - min_grade;

    System.out.println("The range is " + grade_range + " (between " +
    min_grade + " and " + max_grade + ").");
}

```

```

public static void main(String[] args){

    Scanner input = new Scanner(System.in);

    System.out.print("Enter number of grades: ");

    // Get user input for number of grades.

```

```
int no_grades = input.nextInt();
```

```
int[] grades = new int[no_grades];
```

```
// Get user input for grades and store in an array.
```

```
for(int i=0; i<no_grades; i++){
```

```
    int grade = input.nextInt();
```

```
    grades[i] = grade;
```

```
}
```

```
print_grades(grades);
```

```
System.out.println("The average is " + average_grades(grades));
```

```
System.out.println("There are " + grades_above_average(grades) + "  
grades above average.");
```

```
System.out.println("There are " + grades_below_average(grades) + "  
grades above below.");
```

```
grades_range(grades);
```

```
}
```

```
}
```