VAJE 05

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1.

```
/**
Ocenite trenutni kot, ki ga oklepa minutni kazalec ure z vodoravno osjo.

deklarirali in inicializirali spremenljivko z ocenjenim kotom

stopinjah
radianih
gradih
 */

import java.lang.Math.*;

public class vaja01
{
    // instance variables - replace the example below with your own
    public static void main(int minute){
        double angle = ((minute % 60 / 15.0) * 90)-90;
        angle = Math.min(Math.abs(angle%180), 180 - Math.abs(angle%180));

        System.out.println("stopinje: " + angle);
        System.out.println("radiani: " + Math.toRadians(angle));
        System.out.println("gradiani: " + angle * 9/10);

    }
}
```

2.

/**

Javanski program opredeli podatek za poljubno necelоštevilsko vrednost z intervala

-10 do 110 (izberite si jo

sami). Privzemite, da ta vrednost predstavlja

temperaturo v stopinjah Celzija, ki pa bi jo želeli izraziti glede na

lestvice :

Kelvin, Fahrenheit, Rømer, Delisle, Réaumur,Rankine, Newton.

Preračun iz teh v stopinje Celzija se

izvede:

C = (F -32) * 9/5;

C = (K+273.15);

C = (R - 7.5) * 1.9047619; danska skala oz. Rømer

C = (150 - D) * 2/3; Delisle

C = (R - 491.67) / 1.79999999; Rankine

C = R * 1.25; Réaumur

C = N * 3.03030303;

Napišite program, program naj izpiše tudi vreliščne in ledišče vrednosti za vse omenjene lestvice

*/

```
public class vaja02 {
   public static void main(double celzija) {
      if (!(celzija > -10.0 && celzija < 110.0)) {
         System.out.println("Prevelika/premajhna cifra");
         return;
      }

      System.out.println("C: " + celzija + " °C");

      // Kelvin
      double kelvin = celzija - 273.15;
      System.out.println(kelvin + " K");

      // Fahrenheit
      double fahrenheit = (celzija * 9 / 5) + 32;
      System.out.println(fahrenheit + " °F");

      // Rømer
      double romer = (celzija * 21 / 40) + 7.5;
      System.out.println(romer + " °Rø");

      // Delisle
      double delisle = (100 - celzija) * 3 / 2;
      System.out.println(delisle + " °De");

      // Réaumur
      double reaumur = celzija * 0.8;
      System.out.println(reaumur + " °Ré");
```

```
// Rankine
double rankine = (celzija + 273.15) * 9 / 5;
System.out.println(rankine + " °Ra");

// Newton
double newton = celzija * 33 / 100;
System.out.println(newton + " °N");

System.out.println("\nBoiling and Freezing Points:");

double freezingCelsius = 0;
double boilingCelsius = 100;

System.out.println("Celsius: " + freezingCelsius + " °C (Freezing), " + boilingCelsius + " °C (Boiling)");

double freezingKelvin = freezingCelsius + 273.15;
double boilingKelvin = boilingCelsius + 273.15;
System.out.println("Kelvin: " + freezingKelvin + " K (Freezing), " + boilingKelvin + " K (Boiling)");

double freezingFahrenheit = (freezingCelsius * 9 / 5) + 32;
double boilingFahrenheit = (boilingCelsius * 9 / 5) + 32;
System.out.println("Fahrenheit: " + freezingFahrenheit + " °F (Freezing), " + boilingFahrenheit + " °F (Boiling)");

double freezingRomer = (freezingCelsius * 21 / 40) + 7.5;
double boilingRomer = (boilingCelsius * 21 / 40) + 7.5;
System.out.println("Rømer: " + freezingRomer + " °Rø (Freezing), " + boilingRomer + " °Rø (Boiling)");

double freezingDelisle = (100 - freezingCelsius) * 3 / 2;
double boilingDelisle = (100 - boilingCelsius) * 3 / 2;
System.out.println("Delisle: " + freezingDelisle + " °De (Freezing), " + boilingDelisle + " °De (Boiling)");

double freezingReaumur = freezingCelsius * 0.8;
double boilingReaumur = boilingCelsius * 0.8;
System.out.println("Réaumur: " + freezingReaumur + " °Ré (Freezing), " + boilingReaumur + " °Ré (Boiling)");

double freezingRankine = (freezingCelsius + 273.15) * 9 / 5;
double boilingRankine = (boilingCelsius + 273.15) * 9 / 5;
System.out.println("Rankine: " + freezingRankine + " °Ra (Freezing), " + boilingRankine + " °Ra (Boiling)");
```

```
        double freezingNewton = freezingCelsius * 33 / 100;
        double boilingNewton = boilingCelsius * 33 / 100;
        System.out.println("Newton: " + freezingNewton + " °N (Freezing), " + boilingNewton + " °N (Boiling)");
    }
}
```

3. NALOGA

```
import java.lang.Math.*;

public class vaja03 {
    public static void main(double input) {
        //1234.5678

        int x = (int)input;
        int y = (int)(input%1 * 10000);

        System.out.println(x>y? "true" : "false");

    }
}
```

4. Naloga

```
public class vaja04
{
    public static void Intersection(int x1, int y1, int r1, int x2, int y2, int r2){
        System.out.println(((x1-r1 <= x2 - r2 && x1+r1 >= x2 - r2 || x1-r1 <= x2 + r2 && x1+r1 >= x2 + r2)||(y2 + r2 >= y1-r1 && y2 + r2 <= y1+r1 || y2 - r2 >= y1-r1 && y2 - r2 <= y1+r1)? "Seka" : "Ne seka"));
    }
    public static void main(String[] args){
        Intersection(1, 1, 1, 5, 0, 15);
    }
}
```

5. Naloga

```java
import java.lang.Math.*;
import java.util.*;

public class vaja05
{
    public static void main(){
        Random rand = new Random();
        int[] seznam = new int[5];

        for(int i=0; i<5; i++){
            int a = rand.nextInt(18);
            seznam[i] = a;
            System.out.println(a);
        }

        int smallest = 0;
        for(int i=0; i<seznam.length; i++){
            if(seznam[smallest] > seznam[i]){
                smallest=i;
            }
        }

        int biggest = 0;
        for(int i=0; i<seznam.length; i++){
            if(seznam[biggest] < seznam[i]){
                biggest=i;
            }
        }

        System.out.printf("\nNajmanjša ustvarjena vrednost je %d.", seznam[smallest]);
        System.out.printf("\nNajvečja ustvarjena vrednost je %d.", seznam[biggest]);
    }
}
```

6. Naloga

```java
import java.lang.Math.*;
import java.util.*;

public class vaja06
{

    public static void main(String[] args){
        Random rand= new Random();

        int x1 = rand.nextInt(31);
        int y1 = rand.nextInt(31);

        int x2 = rand.nextInt(31);
        int y2 = rand.nextInt(31);

        if(!(x1 <= 30 && x2 <=30 && y1 <=30 && y2 <=30)){
            System.out.printf("Tocak izven ravninske mreže");
            return;
        }

        System.out.printf("1: (%d, %d)\n", x1, y1);
        System.out.printf("2: (%d, %d)\n", x2, y2);
        System.out.printf("Ploščina: %d\n", Math.abs(x1-x2) * Math.abs(y2-y1));
        System.out.printf("Obseg: %d", Math.abs(x1-x2) * 2 + 2* Math.abs(y2-y1));

    }
}
```

7. Naloga

```java
import java.util.Random;


public class vaja07{

    public static void main(String[] args){
        Random rand = new Random();
        int dolz1 = rand.nextInt(30) + 1;
        int dolz2 = rand.nextInt(30) + 1;
        int dolz3 = rand.nextInt(30) + 1;

         System.out.printf("dolz1: %d\ndolz2: %d\ndolz3: %d\n", dolz1, dolz2, dolz3);
         System.out.printf("Ali je dolz1 daljša od dolz2? %b", dolz1 > dolz2);
    }
}
```