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import java.util.Scanner;

public class Homework3 {

public static int factorial(int y) {

int fact = 1;

for(int i =1; i <= y; i++) {

fact = fact \* i;

}

return fact;

}

public static boolean checkPrime(int x) {

boolean isPrime = true;

for(int i = 2; i <= x/2; i++) {

if(x % i == 0) {

isPrime = false;

break;

}

} ✓

return isPrime;

}

public void listPrime(int y) {

for(int i =0; i <= y; i++ ) { **//0 and 1 are not prime**

if(checkPrime(i) == true) {

System.out.println(i);

}

else {

}

}

} ✓

public void min(double a, double b) {

if(a > b) {

System.out.println(b + " is smaller than " + a);

}

else if(b > a) {

System.out.println(a + " is smaller than " + b);

}else {

}

}

public static int calcArea(int x,int y) {

int area = x \* y;

return area;

}

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

Homework3 hw = new Homework3();

//problem 1

System.out.println("Please provide a number");

int N = scan.nextInt();

int fact = hw.factorial(N);

**//You need to compute for all numbers from 1 to N. Use a for-loop here.**

System.out.println("Factorial" + " " + N + "=" + " " + fact);

//problem 2

System.out.println("Please provide another number to list the prime numbers up to that number ");

int p = scan.nextInt();

hw.listPrime(p);

//problem 3

System.out.println("Please provide a number");

double n = scan.nextDouble();

System.out.println("Please provide another number");

double c = scan.nextDouble();

hw.min(n, c);

✓

//problem 4

System.out.println("Please enter the height of a rectangle");

int x = scan.nextInt();

System.out.println("Please enter the width of a rectangle");

int y = scan.nextInt();

hw.calcArea(x, y); **//Display the area with a print statement**

}

}