//optimal solution

/\*public class Main{

public static int gcd(int n1,int n2){

while(n1>0&&n2>0){

if(n1>n2){

n1=n1%n2;

}

else{

n2=n2%n1;

}

}

if(n1==0){

return n2;

}

return n1;

}

public static void main(String[]args){

int n1=10,n2=5;

System.out.println(gcd(n1,n2));

}

}\*/

//brute force approach

public class Main{

public static int gcd(int a,int b){

int gcd=1;

for(int i=1;i<=Math.min(a,b);i++){

if(a%i==0 && b%i==0){

gcd=i;

}

}

return gcd;

}

public static void main(String[]args){

int a=10,b=15;

System.out.println(gcd(a,b));

}

}

//optimal solution

public class Main{

public static int gcd(int n1,int n2){

while(n1>0&&n2>0){

if(n1>n2){

n1=n1%n2;

}

else{

n2=n2%n1;

}

}

if(n1==0){

return n2;

}

return n1;

}

public static int gcd(int n1,int n2,int n3){

return gcd(gcd(n1,n2),n3);

}

public static void main(String[]args){

int n1=9,n2=12,n3=18;

System.out.println(gcd(n1,n2));

}

}

//brute force approach

/\*public class Main{

public static int gcd(int a,int b){

int gcd=1;

for(int i=1;i<=Math.min(a,b);i++){

if(a%i==0 && b%i==0){

gcd=i;

}

}

return gcd;

}

public static void main(String[]args){

int a=10,b=15;

System.out.println(gcd(a,b));

}

}\*/