public class IterationMathLib

extends MathLib{

@Override

Part 1 Greatest Common Divisor

​int gcd (int x, int y){

​​if (y==0) {

​​​

​​​ return x;

​​}

​​​

​​if (x>=y && x !=0)​{

​​​

​​​return gcd(y,x%y);

​​ }

​​​

​​System.out.println("could not create");

​​return 0;

​}

Big O

O (GCD) = 1 (n) 1 ( log(n) ) 1

= n + 1 (log(n) 1

= n+(log(n)1

= n+1

Linear logarithmic

HANOI PIECEWISE FUNCTION

(1) int hanoi(int n) {

(n) while(n!=1) {

(n) if(n>1) {

(logn) return 2\*hanoi(n-1)+1;

}

}

(1) return 1;

}

1(n(n(logn))+1)

1(n(nlogn)+1)

1(n2logn)+1

n2logn +1

O= n2logn

O(n2logn)= Quadratic Logarithmic