## Contents

1	AhoCorasick	4
2	BellmanFord	4
3	Deque	4
4	DinicsMaxFlow	4
5	DisjointSet	4
6	${\bf EdmondKarpMaxFlow}$	2
7	Euler Walk	4
8	FFT	4
9	FloydWarshall	4
10	${f Geometry 2D}$	4
	10.1 getTheta	
	10.2 dotProduct	
	10.3 crossProduct	
	10.4 project	
	10.5 magnitude	
	10.6 magnitudeSquared	
	10.7 scale	
	10.8 add	
	10.10 to (subtract) 10.10triangleArea	
	10.11sasSide	
	10.12sssTheta	
	10.13polygonArea	
	10.14segment Intersection	
	10.15pointLineClosestPoint	
	10.16pointSegmentClosestPoint	
	10.17lineLineIntersection	
	10.18segmentSegmentClosestPoints	
	10.19splitConvexPolygon	
	10.20pointInConvexPolygon	
	10.21distance	
	$10.22 far the st Points Indices \dots \dots$	
11	GrahamScan	
12	GraphKColoring	
13	Heap	,
14	LCA	
15	LinearAlgebra	
16	MinCostFlow	

<b>17</b>	Misc
	17.1 LIS
	17.2 fasterLIS
	17.3 bisectRight
	17.4 bisectLeft
	17.5 ternarySearch
	17.6 fib
	17.7 fastExpo
	17.8 multiply
	17.9 multiply
	17.10MatrixChainMultiply
18	NumberTheory
	18.1 crt
	18.2 lcm
	18.3 gcd
	18.4 eEuclid
	18.5 rGcd
	18.6 rEEuclid
	18.7 modLog
	18.8 sqrt
	18.9 modPow
	18.10modPowRec
	18.11choose
	18.12simpleChoose
	18.13factorial
	18.14diof
10	Prime
10	19.1 getPrimes
	19.2 phi (Euler's Totient Function)
	19.3 generatePhi
	19.4 isPrime
	19.5 altPrimes
	19.6 primeFactorize
	19.7 getFactors
	2017 8012 4010 4010 4010 4010 4010 4010 4010 4
<b>20</b>	SCComponents
<b>21</b>	SegmentTree
22	SegmentTreeConcise 4
	Strings
	Strings   4     23.1 prefixFunc   4
	Strings 4   23.1 prefixFunc 4   23.2 zFunc 4
	Strings   4     23.1 prefixFunc   4     23.2 zFunc   4
23	Strings 4   23.1 prefixFunc 4   23.2 zFunc 4   23.3 manacher 4
23 24	Strings 4   23.1 prefixFunc 4   23.2 zFunc 4   23.3 manacher 4   23.4 leastRotation 4   SuffixArray 4
23 24 25	Strings 4   23.1 prefixFunc 4   23.2 zFunc 4   23.3 manacher 4   23.4 leastRotation 4

- 1 AhoCorasick
- 2 BellmanFord
- 3 Deque
- 4 DinicsMaxFlow
- 5 DisjointSet
- 6 EdmondKarpMaxFlow
- 7 EulerWalk
- 8 FFT
- 9 FloydWarshall
- 10 Geometry2D
- 10.1 getTheta
- 10.2 dotProduct
- 10.3 crossProduct
- 10.4 project
- 10.5 magnitude
- 10.6 magnitudeSquared
- 10.7 scale
- 10.8 add
- 10.9 to (subtract)
- 10.10 triangleArea
- 10.11 sasSide
- 10.12 sssTheta
- 10.13 polygonArea
- 10.14 segmentIntersection
- 10.15 pointLineClosestPoint
- 10.16 pointSegmentClosestPoint
- 10.17 lineLineIntersection
- 10.18 segmentSegmentClosestPoints
- 10.19 splitConvexPolygon
- 10.20 pointInConvexPolygon
- 10.21 distance
- 10.22 farthestPointsIndices
- 11 GrahamScan