

Prime numbers to reduce complexity



IA703
AIT Project

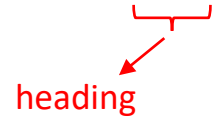
PrimeDecomposeCoding

2056 => 00 1 1 0 01

PrimeDecomposeCoding

2056 => 00 1 1 0 01

heading



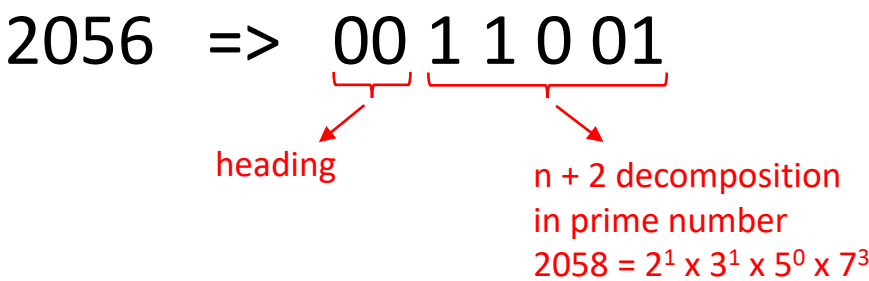
PrimeDecomposeCoding

2056 => 00 1 1 0 01

heading

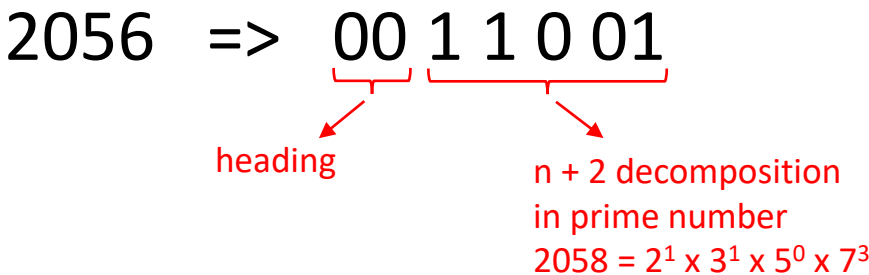
n + 2 decomposition
in prime number
 $2058 = 2^1 \times 3^1 \times 5^0 \times 7^3$

PrimeDecomposeCoding



Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeDecomposeCoding

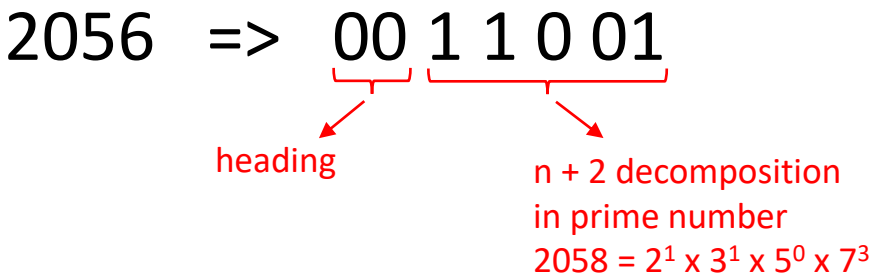


Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

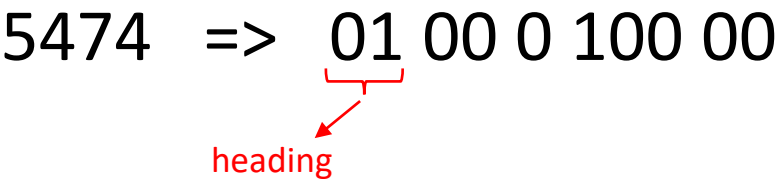
5474 => 01 00 0 100 00

PrimeDecomposeCoding

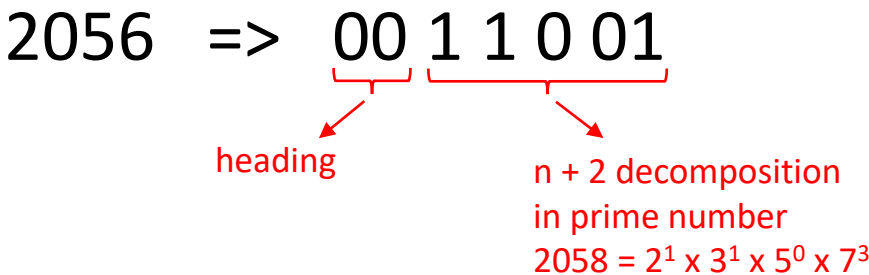


Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

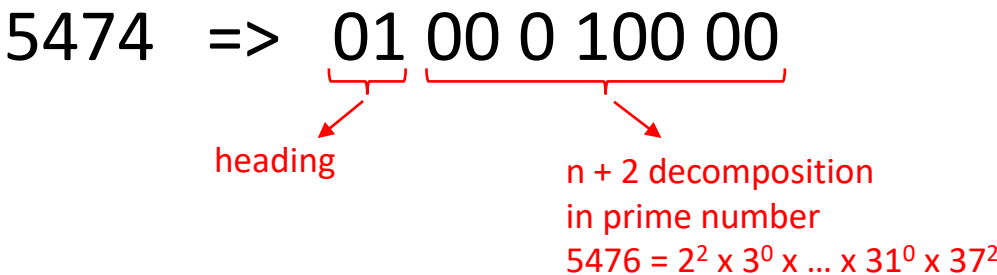


PrimeDecomposeCoding

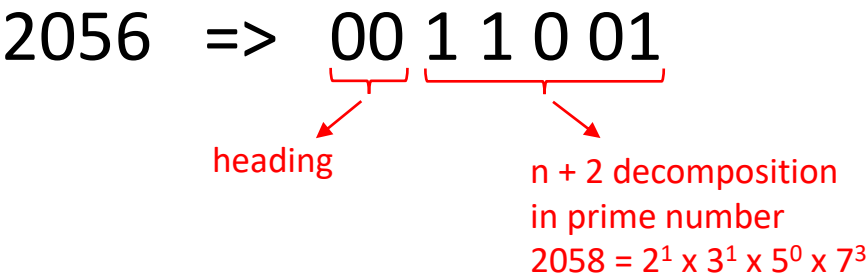


Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

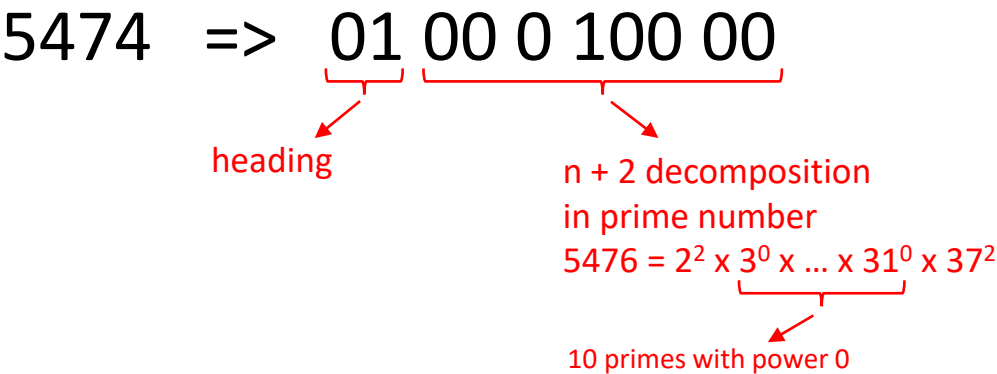


PrimeDecomposeCoding

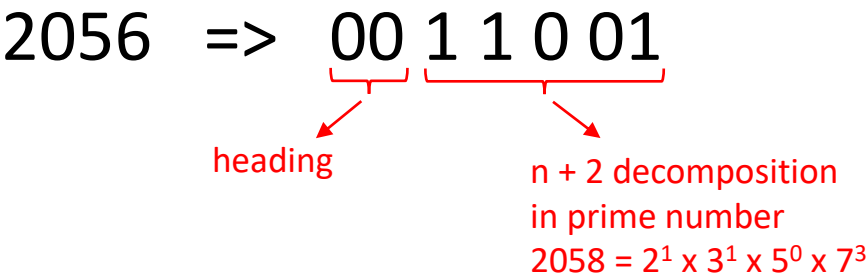


Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

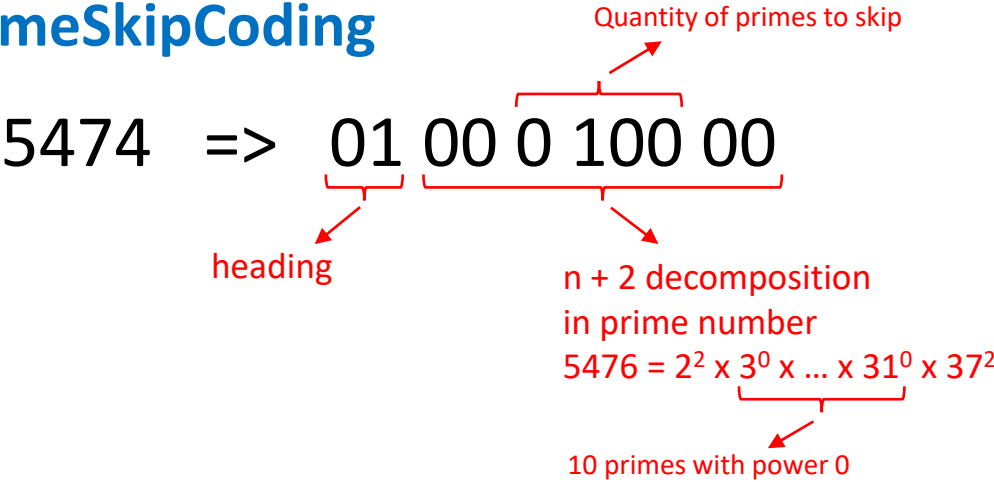


PrimeDecomposeCoding

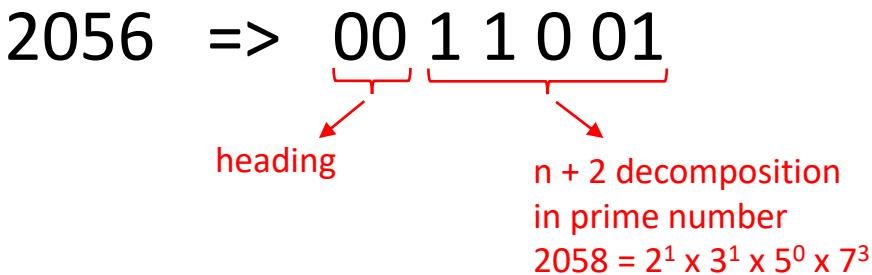


Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

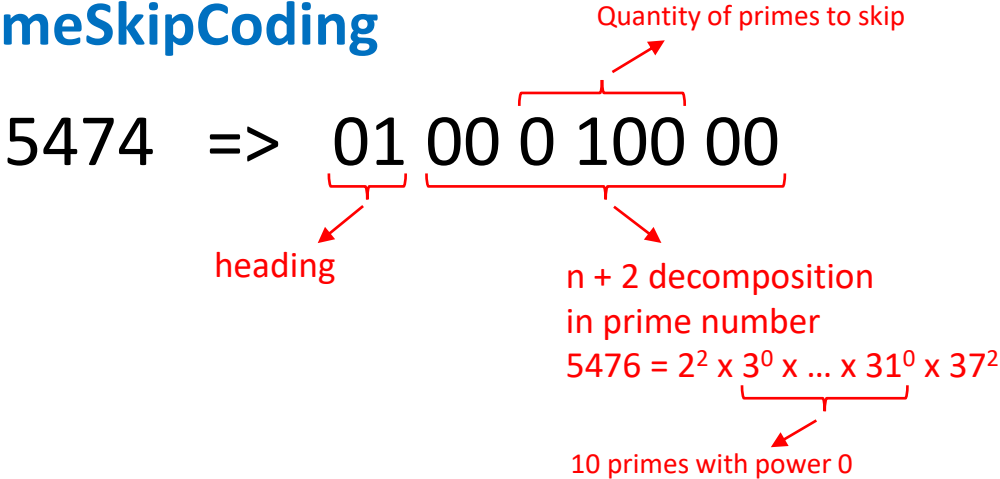


PrimeDecomposeCoding



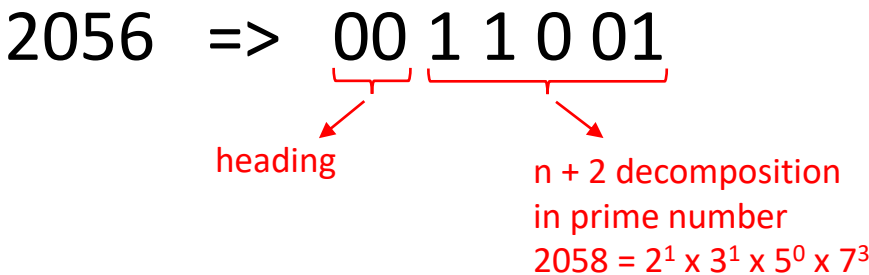
Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding



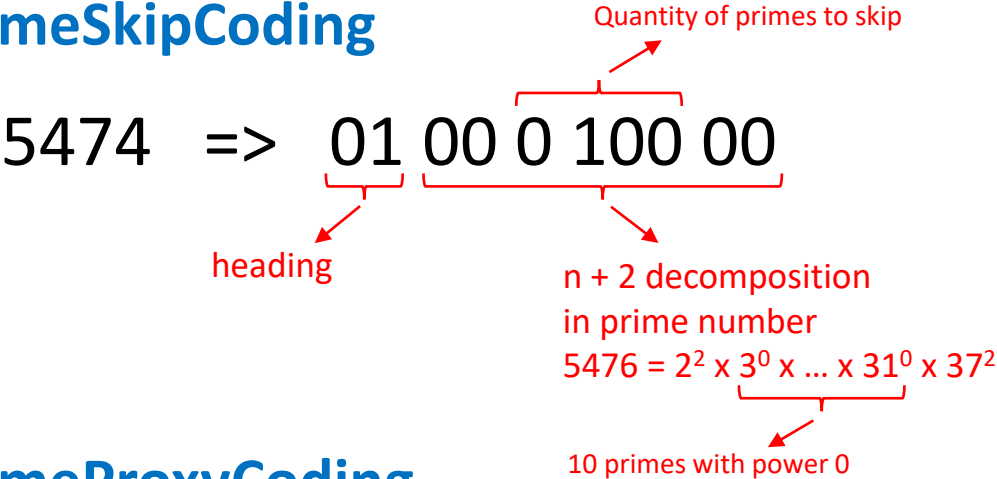
Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

PrimeDecomposeCoding



Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

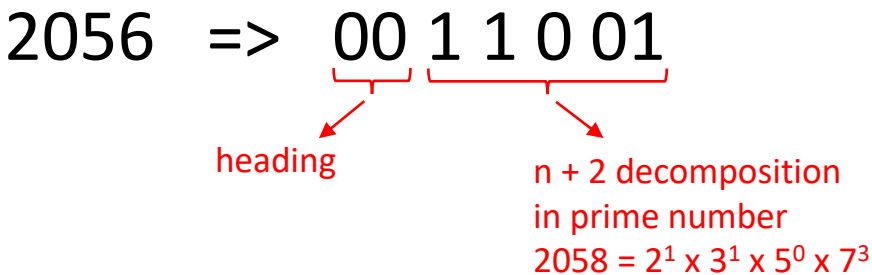


Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

PrimeProxyCoding

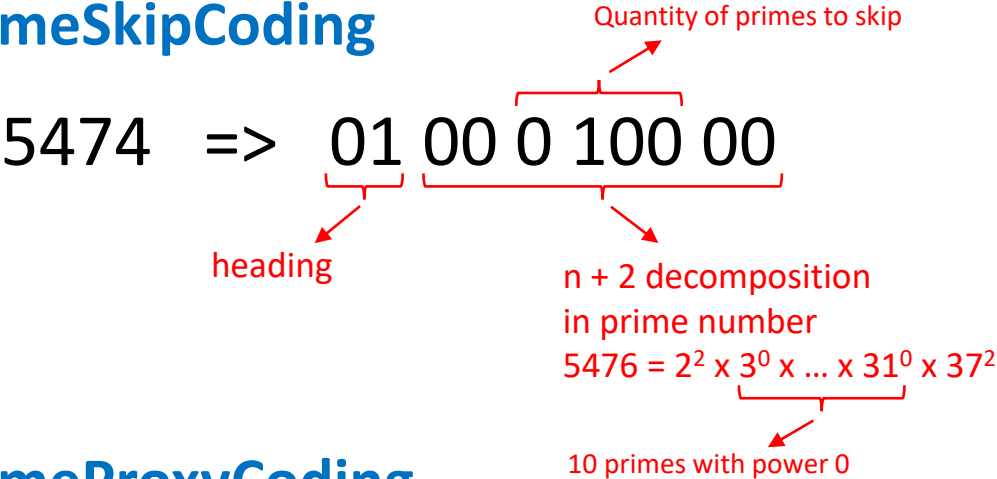
618 => 10 110011 1

PrimeDecomposeCoding



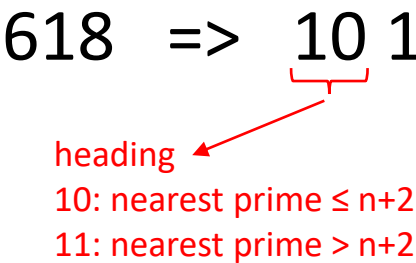
Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

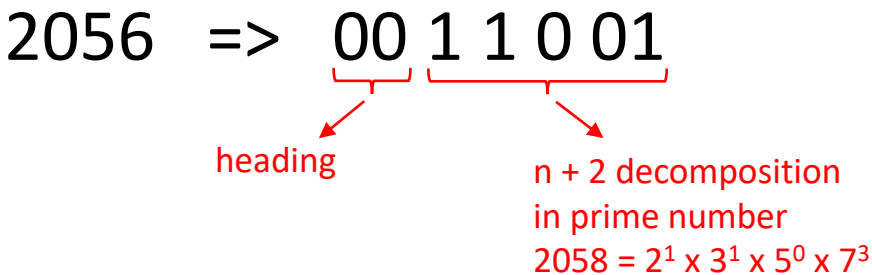


Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

PrimeProxyCoding

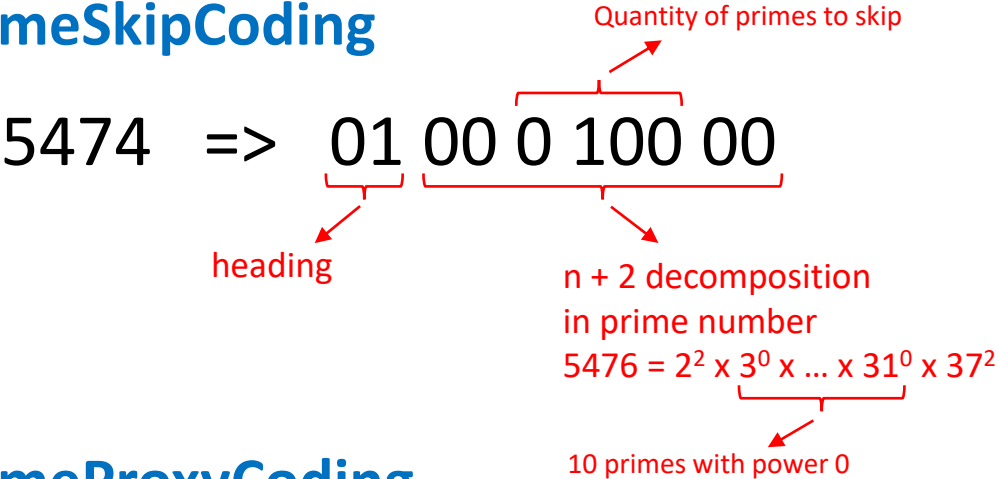


PrimeDecomposeCoding



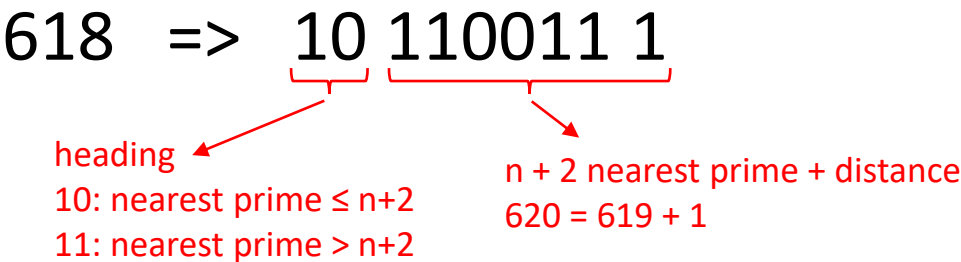
Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

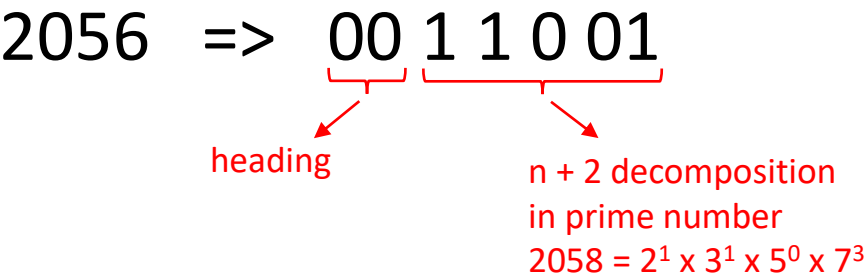


Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

PrimeProxyCoding

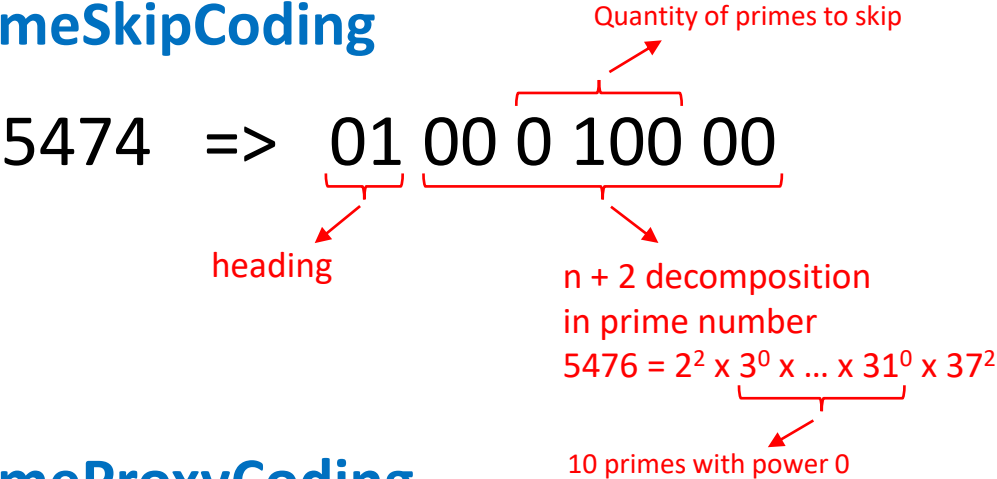


PrimeDecomposeCoding



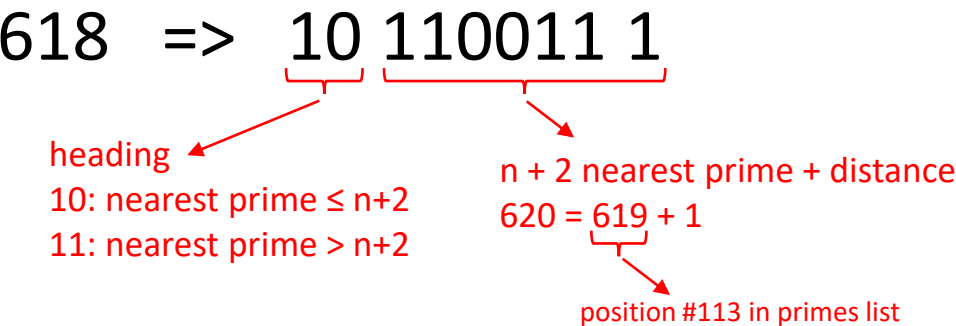
Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

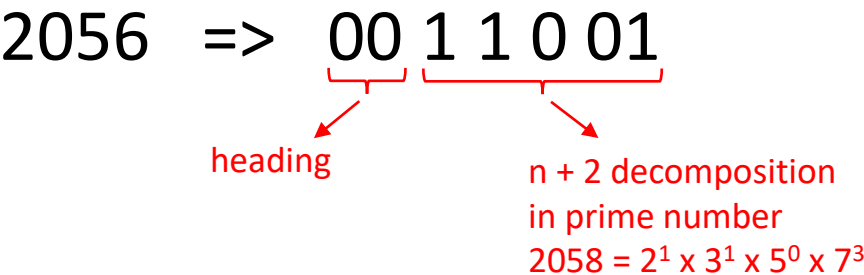


Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

PrimeProxyCoding

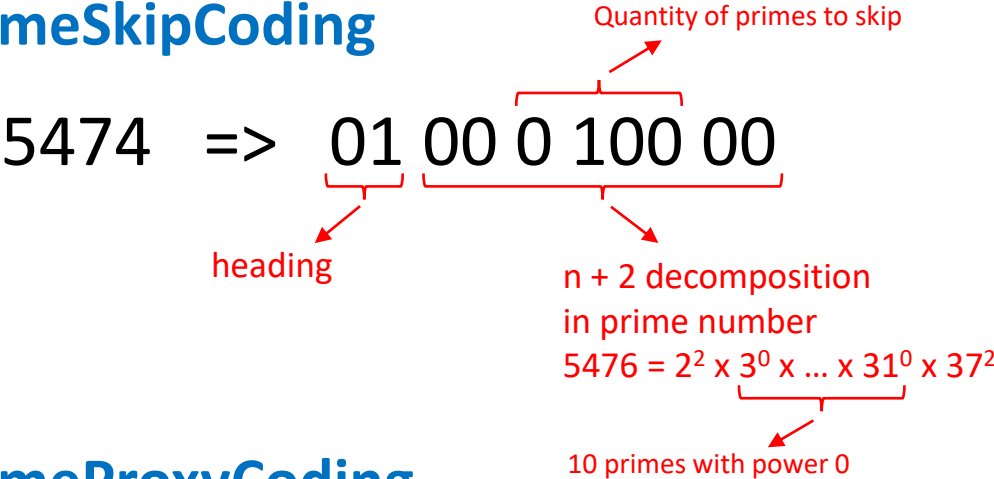


PrimeDecomposeCoding



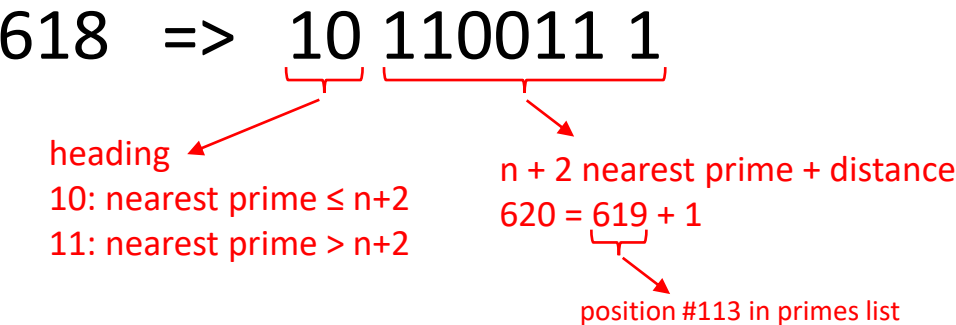
Coding: 2056		
Compact	Round	PrimeDecompose
1 00000001010	00 00 01 11010	00 1 1 0 01
C = 12	C = 11	C = 7

PrimeSkipCoding

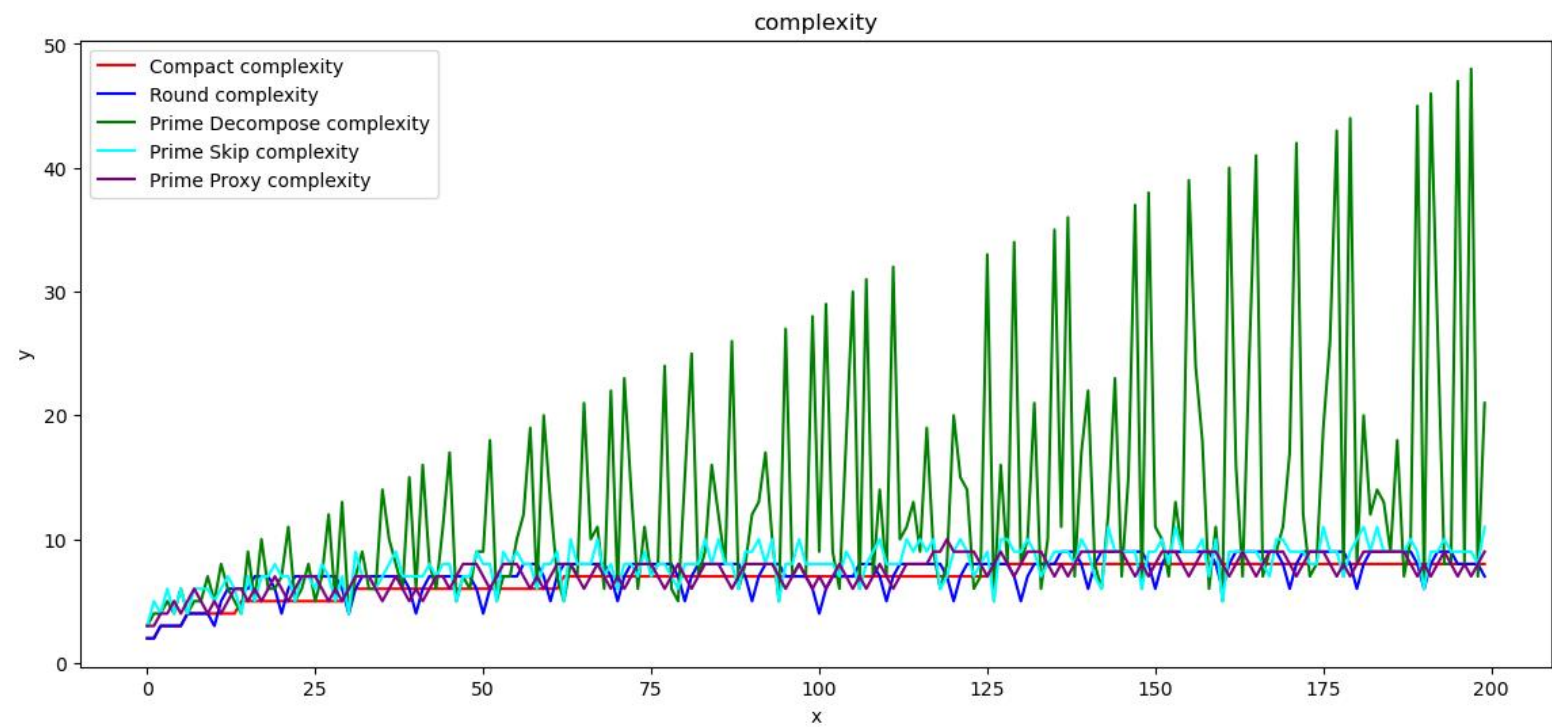


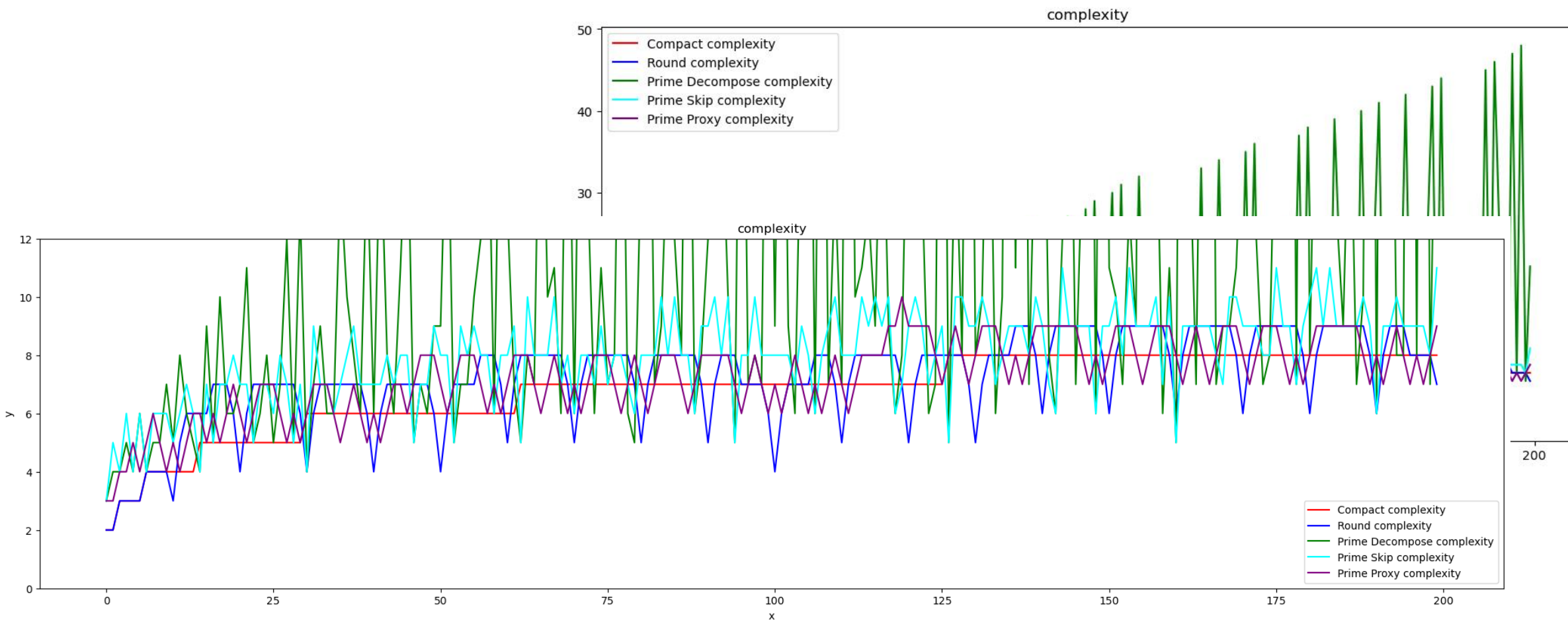
Coding: 5474		
Compact	Round	PrimeSkip
1 010101100100	01 11001 00 1100	01 00 0 100 00
C = 13	C = 13	C = 10

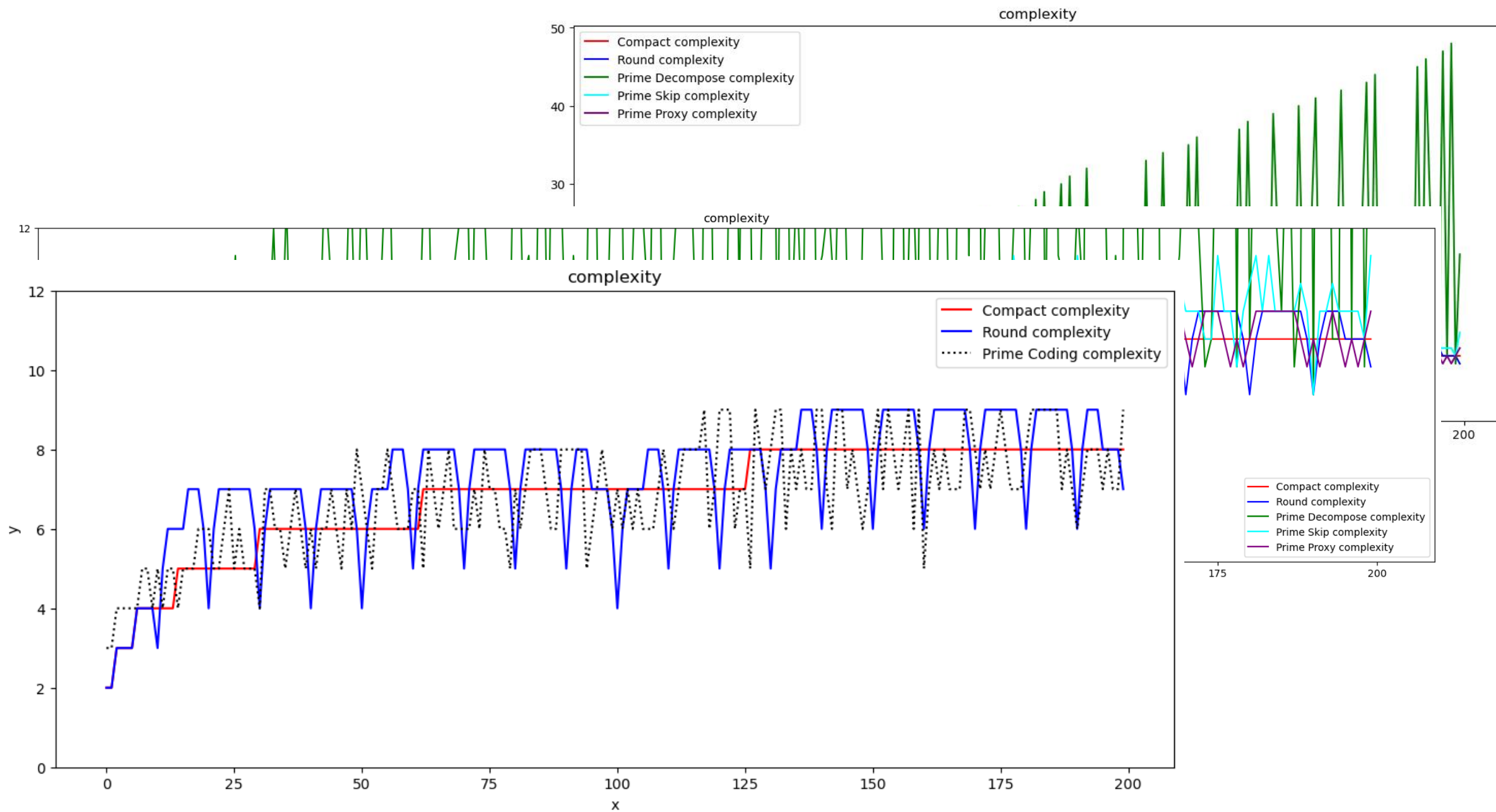
PrimeProxyCoding

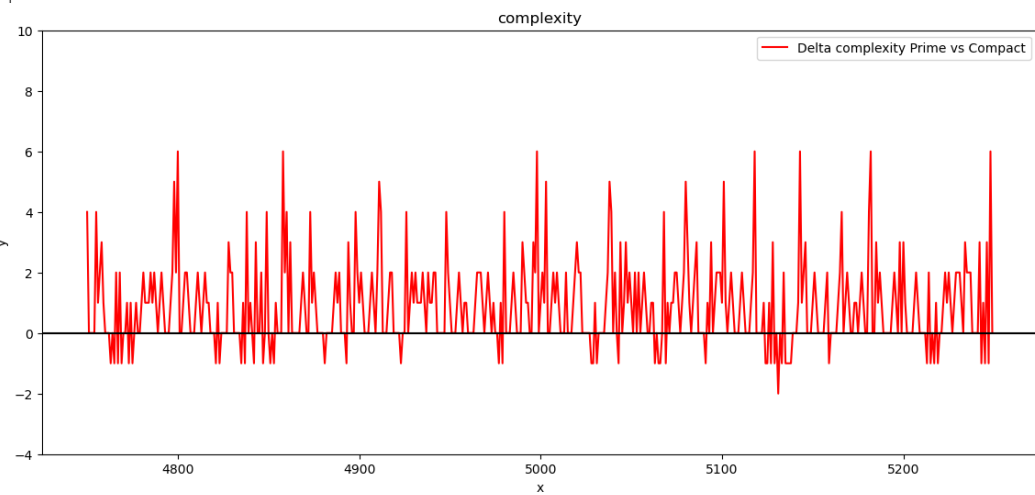
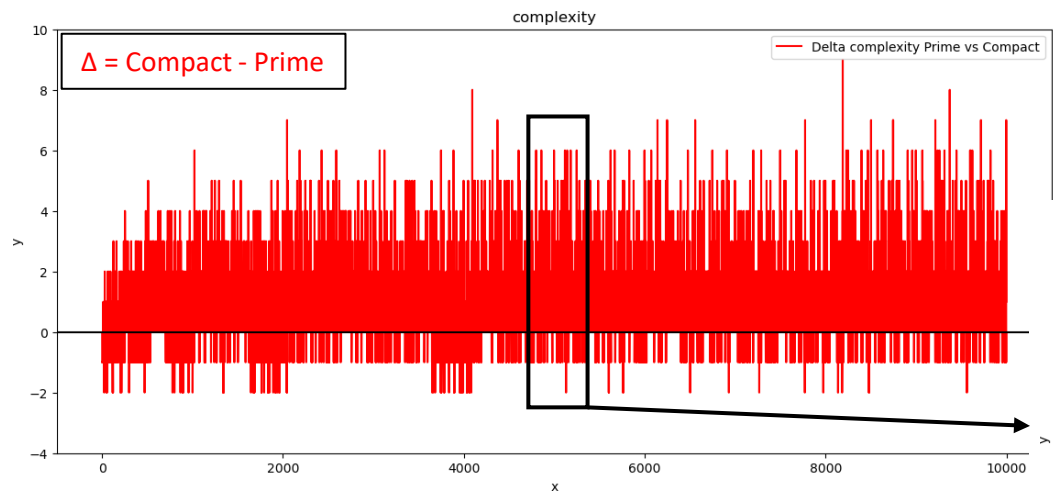


Coding: 618		
Compact	Round	PrimeProxy
1 001101100	00 11111 1 010	10 110011 1
C = 10	C = 11	C = 9

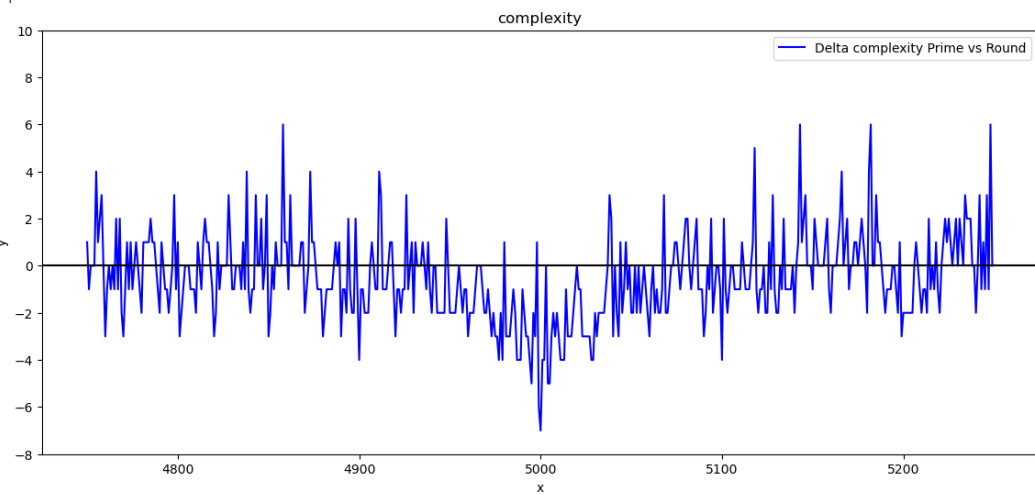
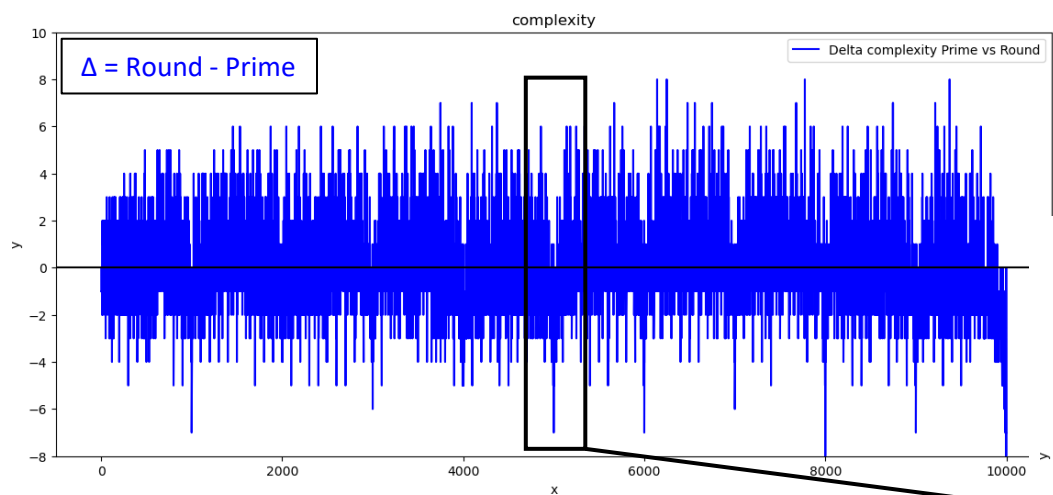








total : 10,000
 # $\Delta > 0$: 4,631
 # $\Delta = 0$: 3,849
 # $\Delta < 0$: 1,520
 Mean : 0.68



total : 10,000
 # $\Delta > 0$: 4,117
 # $\Delta = 0$: 2,281
 # $\Delta < 0$: 3,602
 Mean : 0.12