Main Menu Computers

- h0 = 01100111010001010010001100000001
- h1 = 1110111111100110110101011110001001
- h2 = 100110001011101011011100111111110
- h3 = 00010000001100100101010001110110
- h4 = 110000111101001011100001111110000

Input Text: kareem

Each Letter:

- k
- a
- r
- e
- e
- m
- _

Text to ASCII

- 107
- 97
- 114
- 101
- 101
- 109
- 32

ASCII to Binary

- 01101011
- 01100001
- 01110010
- 01100101
- 01100101
- 01101101
- 00100000

Message:

Append "1":

Append 391 "0's" to make message 448 mod 512:

Append Original Length(111000) in 64 bits:

"Chunk" 0:

Split into 16 words:

- 0: 01101011011000010111001001100101
- 1: 01100101011011010010000010000000

- 15: 000000000000000000000000000111000

Extend into 80 words:

:word 13 XOR word 8 :word 2 :(word 13 XOR word 8) XOR word 2 :Out :(word 13 XOR word 8) XOR word 2 011010110110000101111001001100101:word 0 :((word 13 XOR word 8) XOR word 2) XOR word 0 011010110110000101111001001100101:Out 11010110110000101110010011001010 :Left Rotated 1 11010110110000101110010011001010 :Word 16 :word 14 :word 9 :word 14 XOR word 9 :Out :word 14 XOR word 9 :word 3 :(word 14 XOR word 9) XOR word 3 :Out

:((word 14 XOR word 9) XOR word 3) XOR word 1 01100101011011011010010000010000000:Out 11001010110110100100000100000000 :Left Rotated 1 110010101101101101001000011000000000:Word 17 00000000000000000000000000111000:word 15 :word 10 :word 15 XOR word 10 00000000000000000000000000111000:Out 00000000000000000000000000111000:word 15 XOR word 10 :word 4 :(word 15 XOR word 10) XOR word 4 00000000000000000000000000111000:Out 00000000000000000000000000111000:(word 15 XOR word 10) XOR word 4 :word 2 :((word 15 XOR word 10) XOR word 4) XOR word 2 00000000000000000000000000111000:Out 00000000000000000000000001110000:Left Rotated 1 00000000000000000000000001110000:Word 18 110101101100001011110010011001010

:word 16

:word 11	
:word 16 XOR word 11 11010110110000101110010011001010 :Out	
11010110110000101110010011001010 :word 16 XOR word 11 00000000000000000000000000000000000	
:(word 16 XOR word 11) XOR word 5 11010110110000101110010011001010 :Out	
11010110110000101110010011001010 :(word 16 XOR word 11) XOR word 5 000000000000000000000000000000000000	
:((word 16 XOR word 11) XOR word 5) XOR word 3 11010110110000101110010011001010 :Out	
10101101100001011100100110010101 :Left Rotated 1	
10101101100001011100100110010101 :Word 19	
11001010110110100100000100000000000000	
:word 17 XOR word 12 11001010110110100100000100000000 :Out	
11001010110110100100000100000000000000	
:(word 17 XOR word 12) XOR word 6 11001010110110100100000100000000	

11001010110110100100000100000000 :(word 17 XOR word 12) XOR word 6 :word 4 :((word 17 XOR word 12) XOR word 6) XOR word 4 11001010110110110100100000100000000:Out 10010101101101001000001000000001 :Left Rotated 1 10010101101101001000001000000001 :Word 20 00000000000000000000000001110000:word 18 :word 13 :word 18 XOR word 13 00000000000000000000000001110000:Out 0000000000000000000000001110000:word 18 XOR word 13 :word 7 :(word 18 XOR word 13) XOR word 7 0000000000000000000000001110000:Out 0000000000000000000000001110000:(word 18 XOR word 13) XOR word 7 :word 5 :((word 18 XOR word 13) XOR word 7) XOR word 5 0000000000000000000000001110000:Out

0000000000000000000000011100000

:Left Rotated 1

10101101100001011100100110010101 :word 19 :word 14 :word 19 XOR word 14 10101101100001011100100110010101:Out 10101101100001011100100110010101 :word 19 XOR word 14 :word 8 :(word 19 XOR word 14) XOR word 8 10101101100001011100100110010101 :Out 10101101100001011100100110010101:(word 19 XOR word 14) XOR word 8 :word 6 :((word 19 XOR word 14) XOR word 8) XOR word 6 10101101100001011100100110010101 :Out 01011011000010111001001100101011:Left Rotated 1 01011011000010111001001100101011:Word 22 10010101101101001000001000000001 :word 20 00000000000000000000000000111000:word 15 :word 20 XOR word 15 10010101101101001000001000111001 :Out

10010101101101001000001000111001 :word 20 XOR word 15

0000000000000000000000011100000

:Word 21

00000000000000000000000000000000000000	
:(word 20 XOR word 15) XOR word 9 10010101101101001000001000111001 :Out	
10010101101101001000001000111001 :(word 20 XOR word 15) XOR word 9 000000000000000000000000000000000000	
:((word 20 XOR word 15) XOR word 9) XOR word 7 10010101101101001000001000111001 :Out	
00101011011010010000010001110011 :Left Rotated 1	
00101011011010010000010001110011 :Word 23	
0000000000000000000000011100000 :word 21 11010110110000101110010011001010 :word 16	
:word 21 XOR word 16 11010110110000101110010000101010 :Out	
11010110110000101110010000101010 :word 21 XOR word 16 000000000000000000000000000000000000	
:(word 21 XOR word 16) XOR word 10 11010110110000101110010000101010 :Out	
11010110110000101110010000101010 :(word 21 XOR word 16) XOR word 10 00000000000000000000000000000000000	
:((word 21 XOR word 16) XOR word 10) XOR word 8 11010110110000101110010000101010	

10101101100001011100100001010101 :Left Rotated 1 10101101100001011100100001010101 :Word 24 01011011000010111001001100101011:word 22 110010101101101101001000011000000000:word 17 :word 22 XOR word 17 10010001110100011101001000101011 :Out 10010001110100011101001000101011 :word 22 XOR word 17 :word 11 :(word 22 XOR word 17) XOR word 11 10010001110100011101001000101011 :Out 10010001110100011101001000101011:(word 22 XOR word 17) XOR word 11 :word 9 :((word 22 XOR word 17) XOR word 11) XOR word 9 10010001110100011101001000101011:Out 00100011101000111010010001010111:Left Rotated 1 00100011101000111010010001010111:Word 25 00101011011011010010000010001110011:word 23 0000000000000000000000001110000:word 18

:word 23 XOR word 18

00101011011011010010000010000000011:word 23 XOR word 18 :word 12 :(word 23 XOR word 18) XOR word 12 00101011011011010010000010000000011:Out 00101011011010010000010000000011 :(word 23 XOR word 18) XOR word 12 :word 10 :((word 23 XOR word 18) XOR word 12) XOR word 10 00101011011011010010000010000000011:Out 01010110110100100000100000000110:Left Rotated 1 01010110110100100000100000000110:Word 26 10101101100001011100100001010101 :word 24 10101101100001011100100110010101:word 19 :word 24 XOR word 19 0000000000000000000000111000000:Out 0000000000000000000000111000000:word 24 XOR word 19 :word 13 :(word 24 XOR word 19) XOR word 13 0000000000000000000000111000000:Out

00101011011011010010000010000000011

0000000000000000000000111000000 :(word 24 XOR word 19) XOR word 13

:word 11	
:((word 24 XOR word 19) XOR word 13) XOR word 11 00000000000000000000000111000000 :Out	
000000000000000000001110000000 :Left Rotated 1	
000000000000000000001110000000 :Word 27	
00100011101000111010010001010111	
:word 25 10010101101101001000001000000001 :word 20	
:word 25 XOR word 20 10110110000101110010011001010110 :Out	
10110110000101110010011001010110 :word 25 XOR word 20 00000000000000000000000000000000000	
:(word 25 XOR word 20) XOR word 14 10110110000101110010011001010110 :Out	
10110110000101110010011001010110 :(word 25 XOR word 20) XOR word 14 000000000000000000000000000000000000	
:((word 25 XOR word 20) XOR word 14) XOR word 12 10110110000101110010011001010110 :Out	
01101100001011100100110010101101 :Left Rotated 1	

01101100001011100100110010101101

:Word 28

01010110110100100000100000000110:word 26 0000000000000000000000011100000:word 21 :word 26 XOR word 21 01010110110100100000100011100110:Out 01010110110100100000100011100110:word 26 XOR word 21 00000000000000000000000000111000:word 15 :(word 26 XOR word 21) XOR word 15 01010110110100100000100011011110:Out 01010110110100100000100011011110:(word 26 XOR word 21) XOR word 15 :word 13 :((word 26 XOR word 21) XOR word 15) XOR word 13 01010110110100100000100011011110:Out 10101101101001000001000110111100:Left Rotated 1 101011011010010000010001101111100:Word 29 0000000000000000000001110000000:word 27 01011011000010111001001100101011:word 22 :word 27 XOR word 22 01011011000010111001000010101011:Out 01011011000010111001000010101011:word 27 XOR word 22 11010110110000101110010011001010 :word 16 :(word 27 XOR word 22) XOR word 16

100011011100100101111010001100001 :Out 100011011100100101111010001100001 :(word 27 XOR word 22) XOR word 16 :word 14 :((word 27 XOR word 22) XOR word 16) XOR word 14 100011011100100101111010001100001:Out 00011011100100101110100011000011:Left Rotated 1 000110111001001011110100011000011 :Word 30 01101100001011100100110010101101:word 28 00101011011011010010000010001110011:word 23 :word 28 XOR word 23 01000111010001110100100011011110:Out 01000111010001110100100011011110:word 28 XOR word 23 110010101101101101001000011000000000:word 17 :(word 28 XOR word 23) XOR word 17 10001101100111010000100111011110 :Out 10001101100111010000100111011110 :(word 28 XOR word 23) XOR word 17 00000000000000000000000000111000:word 15 :((word 28 XOR word 23) XOR word 17) XOR word 15

00011011001110100001001111001101 :Left Rotated 1

10001101100111010000100111100110

00011011001110100001001111001101:Word 31 101011011010010000010001101111100:word 29 10101101100001011100100001010101:word 24 :word 29 XOR word 24 00000000001000011101100111101001:Out 00000000001000011101100111101001:word 29 XOR word 24 0000000000000000000000001110000:word 18 :(word 29 XOR word 24) XOR word 18 0000000001000011101100110011001:Out 00000000001000011101100110011001:(word 29 XOR word 24) XOR word 18 11010110110000101110010011001010 :word 16 :((word 29 XOR word 24) XOR word 18) XOR word 16 11010110111000110011110101010011:Out 10101101110001100111101010100111 :Left Rotated 1 10101101110001100111101010100111 :Word 32 00011011100100101110100011000011:word 30 00100011101000111010010001010111:word 25

:word 30 XOR word 25

:Out

00111000001100010100110010010100 :word 30 XOR word 25 10101101100001011100100110010101 :word 19 :(word 30 XOR word 25) XOR word 19 10010101101101001000010100000001 :Out 10010101101101101001000010100000001:(word 30 XOR word 25) XOR word 19 110010101101101101001000011000000000:word 17 :((word 30 XOR word 25) XOR word 19) XOR word 17 010111110110111011000100000000001:Out 101111101101110110001000000000010 :Left Rotated 1 101111101101110110001000000000010 :Word 33 00011011001110100001001111001101:word 31 01010110110100100000100000000110:word 26 :word 31 XOR word 26 010011011111010000001101111001011:Out 010011011111010000001101111001011:word 31 XOR word 26 10010101101101001000001000000001 :word 20 :(word 31 XOR word 26) XOR word 20 11011000010111001001100111001010 :Out 11011000010111001001100111001010 :(word 31 XOR word 26) XOR word 20 0000000000000000000000001110000:word 18

:((word 31 XOR word 26) XOR word 20) XOR word 18

11011000010111001001100110111010 :Out	
10110000101110010011001101110101 :Left Rotated 1	
10110000101110010011001101110101 :Word 34	
1010110111000110011110101010111	
:word 32 000000000000000000001110000000 :word 27	
:word 32 XOR word 27 101011011100011001111001001001111 :Out	
1010110111000110011111001001001111 :word 32 XOR word 27 00000000000000000000000011100000 :word 21	
:(word 32 XOR word 27) XOR word 21 10101101110001100111100111000111 :Out	
10101101110001100111100111000111 :(word 32 XOR word 27) XOR word 21 10101101100001011100100110010101 :word 19	
:((word 32 XOR word 27) XOR word 21) XOR word 19 0000000010000111011000001010010 :Out	
0000000100001110110000010100100 :Left Rotated 1	
0000000100001110110000010100100 :Word 35	

:word 33 XOR word 28 110100101111001111000100101011111 :Out 110100101111001111000100101011111 :word 33 XOR word 28 01011011000010111001001100101011:word 22 :(word 33 XOR word 28) XOR word 22 1000100111111100001010111110000100:Out 1000100111111100001010111110000100 :(word 33 XOR word 28) XOR word 22 10010101101101001000001000000001:word 20 :((word 33 XOR word 28) XOR word 22) XOR word 20 00011100010011001101010110000101:Out 00111000100110011010101100001010:Left Rotated 1 00111000100110011010101100001010:Word 36 10110000101110010011001101110101 :word 34 101011011010010000010001101111100 :word 29 :word 34 XOR word 29 00011101000111010010001011001001:Out 00011101000111010010001011001001 :word 34 XOR word 29 00101011011011010010000010001110011:word 23

:(word 34 XOR word 29) XOR word 23 001101100111010000100110101111010 :Out 00110110011101000010011010111010 :(word 34 XOR word 29) XOR word 23 00000000000000000000000011100000 :word 21

:((word 34 XOR word 29) XOR word 23) XOR word 21 00110110011101000010011001011010 :Out

01101100111010000100110010110100 :Left Rotated 1

01101100111010000100110010110100 :Word 37

0000000100001110110000010100100 :word 35 000110111001001011110100011000011 :word 30

:word 35 XOR word 30 00011011000101011000100001100111 :Out

00011011000101011000100001100111 :word 35 XOR word 30 10101101100001011100100001010101 :word 24

:(word 35 XOR word 30) XOR word 24 10110110100100000100000000110010 :Out

1011011010010000010000000110010 :(word 35 XOR word 30) XOR word 24 0101101100001011100100110010111 :word 22

:((word 35 XOR word 30) XOR word 24) XOR word 22 111011011001101111101001100011001 :Out

110110110011011111010011000110011 :Left Rotated 1

110110110011011111010011000110011 :Word 38

00111000100110011010101100001010:word 36 00011011001110100001001111001101:word 31 :word 36 XOR word 31 00100011101000111011100011000111:Out 00100011101000111011100011000111:word 36 XOR word 31 00100011101000111010010001010111:word 25 :(word 36 XOR word 31) XOR word 25 0000000000000000001110010010000:Out 0000000000000000001110010010000:(word 36 XOR word 31) XOR word 25 00101011011011010010000010001110011:word 23 :((word 36 XOR word 31) XOR word 25) XOR word 23 00101011011010010001100011100011:Out 01010110110100100011000111000110:Left Rotated 1 01010110110100100011000111000110:Word 39 01101100111010000100110010110100:word 37 10101101110001100111101010100111:word 32 :word 37 XOR word 32 11000001001011100011011000010011 :Out

110000010010111100011011000010011 :word 37 XOR word 32 01010110110100100000100000000110 :word 26

:(word 37 XOR word 32) XOR word 26 100101111111111000011111000010101 :Out	
100101111111111000011111000010101 :(word 37 XOR word 32) XOR word 26 10101101100001011100100001010101 :word 24	
:((word 37 XOR word 32) XOR word 26) XOR word 24 00111010011110011111011001000000 :Out	
01110100111100111110110010000000 :Left Rotated 1	
01110100111100111110110010000000 :Word 40	
11011011001101111010011000110011 :word 38 1011111011011101100010000000010 :word 33	
:word 38 XOR word 33 01100101111010100010111000110001 :Out	
01100101111010100010111000110001 :word 38 XOR word 33 00000000000000000000001110000000 :word 27	
:(word 38 XOR word 33) XOR word 27 01100101111010100010110110110001 :Out	
01100101111010100010110110110001 :(word 38 XOR word 33) XOR word 27 0010001110100011101001000101111 :word 25	
:((word 38 XOR word 33) XOR word 27) XOR word 25 01000110010010011000100111100110	

10001100100100110001001111001100:Left Rotated 1 10001100100100110001001111001100 :Word 41 01010110110100100011000111000110:word 39 10110000101110010011001101110101:word 34 :word 39 XOR word 34 11100110011010110000001010110011:Out 11100110011010110000001010110011:word 39 XOR word 34 01101100001011100100110010101101:word 28 :(word 39 XOR word 34) XOR word 28 100010100100010101001111000011110 :Out 100010100100010101001111000011110 :(word 39 XOR word 34) XOR word 28 01010110110100100000100000000110:word 26 :((word 39 XOR word 34) XOR word 28) XOR word 26 110111001001011110100011000011000:Out 101110010010111101000110000110001 :Left Rotated 1 101110010010111101000110000110001 :Word 42

01110100111100111110110010000000 :word 40 00000000100001110110000010100100 :word 35

:word 40 XOR word 35 01110100011101001000110000100100 :Out 01110100011101001000110000100100:word 40 XOR word 35 101011011010010000010001101111100 :word 29 :(word 40 XOR word 35) XOR word 29 11011001110100001001110110011000:Out 11011001110100001001110110011000:(word 40 XOR word 35) XOR word 29 0000000000000000000001110000000:word 27 :((word 40 XOR word 35) XOR word 29) XOR word 27 110110011101000010011111000011000 :Out 101100111010000100111110000110001 :Left Rotated 1 101100111010000100111110000110001 :Word 43 10001100100100110001001111001100:word 41 00111000100110011010101100001010:word 36 :word 41 XOR word 36 101101000000101010111100011000110:Out 101101000000101010111100011000110 :word 41 XOR word 36 00011011100100101110100011000011:word 30 :(word 41 XOR word 36) XOR word 30 10101111100110000101000000000101 :Out

1010111111001100001010000000000101 :(word 41 XOR word 36) XOR word 30 0110110000101111001001100101101

:word 28

:((word 41 XOR word 36) XOR word 30) XOR word 28 11000011101101100001110010101000 :Out 10000111011011000011100101010001:Left Rotated 1 10000111011011000011100101010001:Word 44 101110010010111101000110000110001 :word 42 01101100111010000100110010110100:word 37 :word 42 XOR word 37 11010101110001101100000010000101 :Out 11010101110001101100000010000101 :word 42 XOR word 37 00011011001110100001001111001101:word 31 :(word 42 XOR word 37) XOR word 31 110011101111111001101001101001000:Out 110011101111111001101001101001000 :(word 42 XOR word 37) XOR word 31 101011011010010000010001101111100:word 29 :((word 42 XOR word 37) XOR word 31) XOR word 29 01100011010110001100001011110100:Out 11000110101100011000010111101000 :Left Rotated 1 11000110101100011000010111101000 :Word 45 101100111010000100111110000110001

:word 43

110110110011011111010011000110011 :word 38	
:word 43 XOR word 38 01101000100101101001101000000010 :Out	
011010001001011010001101000000010 :word 43 XOR word 38 1010110111000110011110101010111 :word 32	
:(word 43 XOR word 38) XOR word 32 11000101010100001110000010100101 :Out	
11000101010100001110000010100101 :(word 43 XOR word 38) XOR word 32 00011011100100101110100011000011 :word 30	
:((word 43 XOR word 38) XOR word 32) XOR word 30 11011110110000100000100001100110 :Out	
10111101100001000001000011001101 :Left Rotated 1	
10111101100001000001000011001101 :Word 46	
10000111011011000011100101010001	
:word 44 01010110110100100011000111000110 :word 39	
:word 44 XOR word 39 110100011011111100000100010010111 :Out	
110100011011111100000100010010111 :word 44 XOR word 39 101111101101110110001000000000010 :word 33	
:(word 44 XOR word 39) XOR word 33 01101111011000111000000010010101	

011011110110001111000000010010101:(word 44 XOR word 39) XOR word 33 00011011001110100001001111001101:word 31 :((word 44 XOR word 39) XOR word 33) XOR word 31 01110100010110011001001101011000:Out 1110100010110011001001101011010000 :Left Rotated 1 1110100010110011001001101011010000 :Word 47 11000110101100011000010111101000 :word 45 011101001111100111110110010000000:word 40 :word 45 XOR word 40 10110010010000100110100101101000:Out 10110010010000100110100101101000:word 45 XOR word 40 10110000101110010011001101110101:word 34 :(word 45 XOR word 40) XOR word 34 000000101111110110101101000011101:Out 00000010111110110101101000011101:(word 45 XOR word 40) XOR word 34 10101101110001100111101010100111 :word 32 :((word 45 XOR word 40) XOR word 34) XOR word 32 10101111001111010010000010111010

01011110011110100100000101110101 :Left Rotated 1

10111101100001000001000011001101 :word 46 10001100100100110001001111001100 :word 41 :word 46 XOR word 41 001100010001011110000001100000001:Out 001100010001011110000001100000001 :word 46 XOR word 41 0000000100001110110000010100100:word 35 :(word 46 XOR word 41) XOR word 35 00110001100100000110001110100101:Out 00110001100100000110001110100101:(word 46 XOR word 41) XOR word 35 101111101101110110001000000000010:word 33 :((word 46 XOR word 41) XOR word 35) XOR word 33 1000111101001101111101011110100111 :Out 00011110100110111101011101001111:Left Rotated 1 0001111010011011111010111101001111:Word 49 1110100010110011001001101011010000 :word 47 101110010010111101000110000110001:word 42 :word 47 XOR word 42 0101000110011101101010101010000001:Out

01011110011110100100000101110101

01010001100111011010101010000001

:word 47 XOR word 42

:Word 48

0011100010011001101010100001010 :word 36	
:(word 47 XOR word 42) XOR word 36 01101001000001000000000110001011 :Out	
01101001000001000000000110001011 :(word 47 XOR word 42) XOR word 36 10110000101110010011001101110101 :word 34	
:((word 47 XOR word 42) XOR word 36) XOR word 34 1101100110111110100110010111111110 :Out	
101100110111101001100101111111101 :Left Rotated 1	
101100110111101001100101111111101 :Word 50	
01011110011110100100000101110101 :word 48 10110011101000010011110000110001 :word 43	
:word 48 XOR word 43 1110110111011011011111101000100 :Out	
111011011101101101111110101000100 :word 48 XOR word 43 01101100111010000100110010110100 :word 37	
:(word 48 XOR word 43) XOR word 37 100000010011001100111000111110000 :Out	
10000001001100110011000111110000 :(word 48 XOR word 43) XOR word 37 00000000100001110110000010100100 :word 35	
:((word 48 XOR word 43) XOR word 37) XOR word 35	

000000110110100010100010101010101:Left Rotated 1 000000110110100010100010101010101:Word 51 00011110100110111101011101001111:word 49 10000111011011000011100101010001:word 44 :word 49 XOR word 44 100110011111011111110111000011110 :Out 1001100111110111111101110000111110 :word 49 XOR word 44 110110110011011111010011000110011 :word 38 :(word 49 XOR word 44) XOR word 38 01000010110000000100100000101101:Out 01000010110000000100100000101101:(word 49 XOR word 44) XOR word 38 00111000100110011010101100001010:word 36 :((word 49 XOR word 44) XOR word 38) XOR word 36 011110100101100111110001100100111:Out 111101001011001111100011001001110 :Left Rotated 1 111101001011001111100011001001110 :Word 52 1011001101111101001100101111111101 :word 50 11000110101100011000010111101000 :word 45

:word 50 XOR word 45

:Out 0111010111100101111110000000010101:word 50 XOR word 45 01010110110100100011000111000110:word 39 :(word 50 XOR word 45) XOR word 39 00100011000110011101000111010011:Out 00100011000110011101000111010011:(word 50 XOR word 45) XOR word 39 01101100111010000100110010110100:word 37 :((word 50 XOR word 45) XOR word 39) XOR word 37 010011111111100011001110101100111:Out 100111111111000110011101011001110 :Left Rotated 1 100111111111000110011101011001110 :Word 53 000000110110100010100010101010101:word 51 10111101100001000001000011001101:word 46 :word 51 XOR word 46 10111110111011001011001001100100 :Out 10111110111011001011001001100100 :word 51 XOR word 46 011101001111100111110110010000000:word 40 :(word 51 XOR word 46) XOR word 40 11001010000111110101111011100100 :Out

0111010111100101111110000000010101

11001010000111110101111011100100 :(word 51 XOR word 46) XOR word 40

:word 38	
:((word 51 XOR word 46) XOR word 40) XOR word 38 00010001001010001111100011010111 :Out	
00100010010100011111000110101110 :Left Rotated 1	
00100010010100011111000110101110 :Word 54	
11110100101100111100011001001110 :word 52 1110100010110011001001101010000 :word 47	
:word 52 XOR word 47 0001110000000001110000011111110 :Out	
00011100000000001110000011111110 :word 52 XOR word 47 10001100100100110001001111001100 :word 41	
:(word 52 XOR word 47) XOR word 41 10010000100100111111001100110010 :Out	
10010000100100111111001100110010 :(word 52 XOR word 47) XOR word 41 01010110110100100011000111000110 :word 39	
:((word 52 XOR word 47) XOR word 41) XOR word 39 11000110010000011100001011110100 :Out	
10001100100000111000010111101001 :Left Rotated 1	
10001100100000111000010111101001	

:Word 55

100111111111000110011101011001110 :word 53 01011110011110100100000101110101:word 48 :word 53 XOR word 48 11000001100110010111101110111011 :Out 11000001100110010111101110111011:word 53 XOR word 48 101110010010111101000110000110001:word 42 :(word 53 XOR word 48) XOR word 42 0111100010110111111111111110001010:Out 01111100010110111111111011110001010:(word 53 XOR word 48) XOR word 42 011101001111100111110110010000000:word 40 :((word 53 XOR word 48) XOR word 42) XOR word 40 00001100010001000001101100001010:Out 00011000100010000011011000010100:Left Rotated 1 00011000100010000011011000010100:Word 56 001000100101000111111000110101110:word 54 0001111010011011111010111101001111:word 49 :word 54 XOR word 49 00111100110010100010011011100001:Out 00111100110010100010011011100001:word 54 XOR word 49 101100111010000100111110000110001 :word 43 :(word 54 XOR word 49) XOR word 43

10001111011010110001101011010000 :Out 10001111011010110001101011010000 :(word 54 XOR word 49) XOR word 43 10001100100100110001001111001100 :word 41 :((word 54 XOR word 49) XOR word 43) XOR word 41 0000001111111110000000100100011100:Out 0000011111111100000001001000111000:Left Rotated 1 000001111111100000001001000111000:Word 57 10001100100000111000010111101001 :word 55 1011001101111101001100101111111101 :word 50 :word 55 XOR word 50 00111111111111100111110000000010100:Out 00111111111111100111110000000010100:word 55 XOR word 50 10000111011011000011100101010001:word 44 :(word 55 XOR word 50) XOR word 44 101110001001010111101100101000101 :Out 101110001001010111101100101000101 :(word 55 XOR word 50) XOR word 44 101110010010111101000110000110001 :word 42 :((word 55 XOR word 50) XOR word 44) XOR word 42

000000110111011010101010111101000 :Left Rotated 1

000000011011101101010101011110100

000000110111011010101010111101000:Word 58 00011000100010000011011000010100:word 56 000000110110100010100010101010101:word 51 :word 56 XOR word 51 000110111111000001001010010111101:Out 0001101111110000010010100101111101:word 56 XOR word 51 11000110101100011000010111101000:word 45 :(word 56 XOR word 51) XOR word 45 1101110101010001000100010101010101 :Out 1101110101010001000100010101010101:(word 56 XOR word 51) XOR word 45 101100111010000100111110000110001 :word 43 :((word 56 XOR word 51) XOR word 45) XOR word 43 01101110111100000010110101100100:Out 11011101111000000101101011001000:Left Rotated 1 11011101111000000101101011001000 :Word 59 000001111111100000001001000111000:word 57

:word 57 XOR word 52 11110011010000111101010001110110 :Out

111101001011001111100011001001110

:word 52

11110011010000111101010001110110 :word 57 XOR word 52 10111101100001000001000011001101 :word 46 :(word 57 XOR word 52) XOR word 46 0100111011000111111000100101111011:Out 0100111011000111111000100101111011:(word 57 XOR word 52) XOR word 46 10000111011011000011100101010001:word 44 :((word 57 XOR word 52) XOR word 46) XOR word 44 1100100110101011111111110111101010 :Out 1001001101010111111111101111010101 :Left Rotated 1 1001001101010111111111101111010101 :Word 60 000000110111011010101010111101000:word 58 100111111111000110011101011001110:word 53 :word 58 XOR word 53 10011100100101011001000000100110:Out 10011100100101011001000000100110 :word 58 XOR word 53 11101000101100110010011010110000:word 47 :(word 58 XOR word 53) XOR word 47 01110100001001101011011010010110:Out 01110100001001101011011010010110:(word 58 XOR word 53) XOR word 47 11000110101100011000010111101000 :word 45

:((word 58 XOR word 53) XOR word 47) XOR word 45

10110010100101110011001101111110 :Out	
01100101001011100110011011111101 :Left Rotated 1	
01100101001011100110011011111101 :Word 61	
11011101111000000101101011001000 :word 59 00100010010100011111000110101110 :word 54	
:word 59 XOR word 54 1111111111011000110101101101100110 :Out	
111111111011000110101101101100110 :word 59 XOR word 54 01011110011110100100000101110101 :word 48	
:(word 59 XOR word 54) XOR word 48 10100001110010111110101000010011 :Out	
10100001110010111110101000010011 :(word 59 XOR word 54) XOR word 48 10111101100001000001000011001101 :word 46	
:((word 59 XOR word 54) XOR word 48) XOR word 46 00011100010011111111111010110111110 :Out	
0011100010011111111110101101111100 :Left Rotated 1	
0011100010011111111110101101111100 :Word 62	
100100110101011111111101111010101	

100100110101011111111101111010101
:word 60
10001100100000111000010111101001
:word 55

:word 60 XOR word 55 00011111110101000111111000111100 :Out	
00011111110101000111111000111100 :word 60 XOR word 55 000111101001101111010111101001111 :word 49	
:(word 60 XOR word 55) XOR word 49 00000001010011111010100101110011 :Out	
00000001010011111010100101110011 :(word 60 XOR word 55) XOR word 49 11101000101100110011011010000 :word 47	
:((word 60 XOR word 55) XOR word 49) XOR word 47 111010011111111001000111111000011 :Out	
11010011111110010001111110000111 :Left Rotated 1	
1101001111111100100011111110000111 :Word 63	
01100101001011100110011011111101 :word 61 00011000100010000011011000010100 :word 56	
:word 61 XOR word 56 01111101101001100101000011101001 :Out	
01111101101001100101000011101001 :word 61 XOR word 56 101100110111101001100101111111101 :word 50	
:(word 61 XOR word 56) XOR word 50 110011101101101000110100010100	

11001110110111000011010100010100 :(word 61 XOR word 56) XOR word 50 01011110011110100100000101110101:word 48 :((word 61 XOR word 56) XOR word 50) XOR word 48 10010000101001100111010001100001 :Out 00100001010011001110100011000011:Left Rotated 1 00100001010011001110100011000011:Word 64 0011100010011111111110101101111100 :word 62 000001111111100000001001000111000:word 57 :word 62 XOR word 57 001111111011011111111100111110000100:Out 001111111011011111111100111110000100:word 62 XOR word 57 000000110110100010100010101010101:word 51 :(word 62 XOR word 57) XOR word 51 001111100000001110100010100101101:Out 00111100000001110100010100101101:(word 62 XOR word 57) XOR word 51 00011110100110111101011101001111:word 49

:((word 62 XOR word 57) XOR word 51) XOR word 49 00100010100111001001001001100010 :Out

01000101001110010010010011000100 :Left Rotated 1

01000101001110010010010011000100 :Word 65

1101001111111100100011111110000111 :word 63 000000110111011010101010111101000:word 58 :word 63 XOR word 58 11010000100011111011010101101111:Out 11010000100011111011010101101111:word 63 XOR word 58 111101001011001111100011001001110 :word 52 :(word 63 XOR word 58) XOR word 52 00100100001111000111001100100001:Out 00100100001111000111001100100001:(word 63 XOR word 58) XOR word 52 1011001101111101001100101111111101 :word 50 :((word 63 XOR word 58) XOR word 52) XOR word 50 10010111010001100001011011011100 :Out 00101110100011000010110110111001:Left Rotated 1 00101110100011000010110110111001:Word 66 00100001010011001110100011000011 :word 64 11011101111000000101101011001000:word 59 :word 64 XOR word 59 11111100101011001011001000001011 :Out

11111100101011001011001000001011

100111111111000110011101011001110

:word 64 XOR word 59

:word 53

:(word 64 XOR word 59) XOR word 53 011000110100111111000100011000101:Out 011000110100111111000100011000101:(word 64 XOR word 59) XOR word 53 000000110110100010100010101010101:word 51 :((word 64 XOR word 59) XOR word 53) XOR word 51 01100000001001110010101001101100:Out 110000000100111001010101011011000 :Left Rotated 1 110000000100111001010101011011000 :Word 67 01000101001110010010010011000100:word 65 1001001101010111111111101111010101 :word 60 :word 65 XOR word 60 110101100110111011011111100010001 :Out 110101100110111011011111100010001 :word 65 XOR word 60 001000100101000111111000110101110:word 54 :(word 65 XOR word 60) XOR word 54 1111010000111111100101111010111111 :Out 1111010000111111100101111010111111 :(word 65 XOR word 60) XOR word 54 111101001011001111100011001001110 :word 52 :((word 65 XOR word 60) XOR word 54) XOR word 52 0000000100011001110100011110001:Out

00000001000110011101000111100010:Left Rotated 1 00000001000110011101000111100010:Word 68 00101110100011000010110110111001:word 66 011001010010111001100110111111101:word 61 :word 66 XOR word 61 01001011101000100100101101000100:Out 01001011101000100100101101000100:word 66 XOR word 61 10001100100000111000010111101001 :word 55 :(word 66 XOR word 61) XOR word 55 11000111001000011100111010101101 :Out 11000111001000011100111010101101 :(word 66 XOR word 61) XOR word 55 100111111111000110011101011001110:word 53 :((word 66 XOR word 61) XOR word 55) XOR word 53 010110001100001011111010001100011:Out 10110001100001011110100011000110 :Left Rotated 1 10110001100001011110100011000110 :Word 69 110000000100111001010101011011000 :word 67 0011100010011111111110101101111100

:word 67 XOR word 62 11111000110100011010000101100100 :Out

:word 62

11111000110100011010000101100100 :word 67 XOR word 62 00011000100010000011011000010100:word 56 :(word 67 XOR word 62) XOR word 56 11100000010110011001011101110000:Out 11100000010110011001011101110000:(word 67 XOR word 62) XOR word 56 001000100101000111111000110101110:word 54 :((word 67 XOR word 62) XOR word 56) XOR word 54 11000010000010000110011011011110 :Out 10000100000100001100110110111101:Left Rotated 1 10000100000100001100110110111101:Word 70 00000001000110011101000111100010:word 68 1101001111111100100011111110000111 :word 63 :word 68 XOR word 63 110100101111000001100111001100101:Out 11010010111000001100111001100101 :word 68 XOR word 63 0000011111111100000001001000111000:word 57 :(word 68 XOR word 63) XOR word 57 11010101000100001101110001011101 :Out

11010101000100001101110001011101 :(word 68 XOR word 63) XOR word 57 100011001000000111000010111101001 :word 55

:((word 68 XOR word 63) XOR word 57) XOR word 55 01011001100100110101100110110100:Out 10110011001001101011001101101000:Left Rotated 1 10110011001001101011001101101000:Word 71 10110001100001011110100011000110 :word 69 00100001010011001110100011000011:word 64 :word 69 XOR word 64 100100001100100100000000000000101 :Out 100100001100100100000000000000101 :word 69 XOR word 64 000000110111011010101010111101000:word 58 :(word 69 XOR word 64) XOR word 58 1001001110111111110101010111101101:Out 1001001110111111110101010111101101 :(word 69 XOR word 64) XOR word 58 00011000100010000011011000010100:word 56 :((word 69 XOR word 64) XOR word 58) XOR word 56 10001011001101111001110011111001 :Out 00010110011011111001111001111110011:Left Rotated 1 00010110011011110011100111110011:Word 72 10000100000100001100110110111101

:word 70

01000101001110010010010011000100:word 65 :word 70 XOR word 65 11000001001010011110100101111001 :Out 11000001001010011110100101111001:word 70 XOR word 65 11011101111000000101101011001000:word 59 :(word 70 XOR word 65) XOR word 59 00011100110010011011001110110001:Out 00011100110010011011001110110001:(word 70 XOR word 65) XOR word 59 000001111111100000001001000111000:word 57 :((word 70 XOR word 65) XOR word 59) XOR word 57 00011011001110011010000110001001 :Out 00110110011100110100001100010010:Left Rotated 1 00110110011100110100001100010010:Word 73 10110011001001101011001101101000 :word 71 00101110100011000010110110111001:word 66 :word 71 XOR word 66 10011101101010101001111011010001:Out 100111011010101010011111011010001 :word 71 XOR word 66 1001001101010111111111101111010101 :word 60 :(word 71 XOR word 66) XOR word 60 000011101111111010110010100000100

:Out

000011101111111010110010100000100:(word 71 XOR word 66) XOR word 60 000000110111011010101010111101000:word 58 :((word 71 XOR word 66) XOR word 60) XOR word 58 0000110110001011111001111111101100:Out 0001101100010111110011111111011000:Left Rotated 1 0001101100010111110011111111011000:Word 74 00010110011011110011100111110011 :word 72 110000000100111001010101011011000 :word 67 :word 72 XOR word 67 11010110001000010110110100101011 :Out 11010110001000010110110100101011 :word 72 XOR word 67 011001010010111001100110111111101:word 61 :(word 72 XOR word 67) XOR word 61 101100110000111110000101111010110:Out 10110011000011110000101111010110 :(word 72 XOR word 67) XOR word 61 11011101111000000101101011001000

:((word 72 XOR word 67) XOR word 61) XOR word 59 01101110111011110101000100011110 :Out

11011101110111101010001000111100 :Left Rotated 1

:word 59

00110110011100110100001100010010:word 73 00000001000110011101000111100010:word 68 :word 73 XOR word 68 001101110110101010010010111110000:Out 001101110110101010010010111110000 :word 73 XOR word 68 0011100010011111111110101101111100 :word 62 :(word 73 XOR word 68) XOR word 62 000011111111101010110011101001100:Out 0000111111111101010110011101001100:(word 73 XOR word 68) XOR word 62 1001001101010111111111101111010101 :word 60 :((word 73 XOR word 68) XOR word 62) XOR word 60 10011100101000101001110010011001 :Out 00111001010001010011100100110011:Left Rotated 1 001110010100010100111100100110011:Word 76 0001101100010111110011111111011000:word 74 10110001100001011110100011000110:word 69 :word 74 XOR word 69 10101010100100100111011100011110 :Out

10101010100100100111011100011110 :word 74 XOR word 69

110111011101111010100010001111100

:Word 75

1101001111111100100011111110000111 :word 63	
:(word 74 XOR word 69) XOR word 63 011110010110110110110100010011001 :Out	
01111001011010110110100010011001 :(word 74 XOR word 69) XOR word 63 011001010010111001100110111111101 :word 61	
:((word 74 XOR word 69) XOR word 63) XOR word 61 00011100010001010000111001100100 :Out	
00111000100010100001110011001000 :Left Rotated 1	
00111000100010100001110011001000 :Word 77	
11011101110111101010001000111100 :word 75 10000100000100001100110110111101 :word 70	
:word 75 XOR word 70 010110011100111001101111110000001 :Out	
010110011100111001101111110000001 :word 75 XOR word 70 0010000101001110110100011000011 :word 64	
:(word 75 XOR word 70) XOR word 64 01111000100000101000011101000010 :Out	
01111000100000101000011101000010 :(word 75 XOR word 70) XOR word 64 0011100010011111111110101101111100 :word 62	
:((word 75 XOR word 70) XOR word 64) XOR word 62	

:Out

1000000000111010111100101111111100 :Left Rotated 1

100000000111010111100101111111100 :Word 78

00111001010001010011100100110011 :word 76 10110011001001101011001101101000 :word 71

:word 76 XOR word 71 10001010011000111000101001011011 :Out

10001010011000111000101001011011 :word 76 XOR word 71 01000101001110010010010011000100 :word 65

:(word 76 XOR word 71) XOR word 65 110011110101101010101111010011111 :Out

110011110101101010101111010011111 :(word 76 XOR word 71) XOR word 65 1101001111111100100011111110000111 :word 63

:((word 76 XOR word 71) XOR word 65) XOR word 63 00011100101000111011000100011000 :Out

00111001010001110110001000110000 :Left Rotated 1

00111001010001110110001000110000 :Word 79

- 0: 01101011011000010111001001100101
- 1: 01100101011011010010000010000000

- 15: 000000000000000000000000000111000
- 16: 11010110110000101110010011001010
- 10. 11010110110000101110010011001010
- 17: 11001010110110100100000100000000
- 18: 00000000000000000000000001110000
- 19: 10101101100001011100100110010101
- 20: 10010101101101001000001000000001
- 21: 00000000000000000000000011100000
- 22: 01011011000010111001001100101011
- 23: 00101011011010010000010001110011
- 24: 10101101100001011100100001010101
- 25: 00100011101000111010010001010111
- 26: 010101101101001000001000000000110
- 27: 00000000000000000000001110000000
- 28: 01101100001011100100110010101101
- 29: 101011011010010000010001101111100
- 30: 000110111001001011110100011000011
- 31: 00011011001110100001001111001101
- 32: 101011011100011001111010101010111
- 33: 101111101101110110001000000000010
- 34: 10110000101110010011001101110101
- 35: 00000000100001110110000010100100
- 36: 00111000100110011010101100001010
- 37: 01101100111010000100110010110100
- 38: 110110110011011111010011000110011
- 39: 01010110110100100011000111000110
- 40: 011101001111100111110110010000000
- 41: 10001100100100110001001111001100
- 42: 101110010010111101000110000110001
- 43: 101100111010000100111110000110001
- 44: 10000111011011000011100101010001
- 45: 11000110101100011000010111101000
- 46: 10111101100001000001000011001101
- 47: 11101000101100110010011010110000
- 48: 01011110011110100100000101110101
- 49: 000111101001101111010111101001111
- 50: 10110011011111010011001011111111101
- 51: 000000110110100010100010101010101
- 52: 111101001011001111100011001001110
- 53: 100111111111000110011101011001110
- 54: 001000100101000111111000110101110
- 55: 10001100100000111000010111101001
- 56: 00011000100010000011011000010100
- 57: 000001111111100000001001000111000
- 58: 000000110111011010101010111101000
- 59: 11011101111000000101101011011001000

- 60: 1001001101010111111111101111010101
- 61: 011001010010111001100110111111101
- 62: 00111000100111111111110101101111100
- 63: 1101001111111100100011111110000111
- 64: 00100001010011001110100011000011
- 65: 01000101001110010010010011000100
- 66: 00101110100011000010110110111001
- 67: 110000000100111001010101011011000
- 68: 00000001000110011101000111100010
- 69: 10110001100001011110100011000110
- 70: 100001000001000011001101101111101
- 71: 10110011001001101011001101101000
- 72: 000101100110111100111001111110011
- 73: 00110110011100110100001100010010
- 74: 0001101100010111110011111111011000
- 75: 11011101110111101010001000111100
- 76: 00111001010001010011100100110011
- 77: 00111000100010100001110011001000
- 78: 10000000001110101111001011111111100
- 79: 00111001010001110110001000110000

Set A = h0

01100111010001010010001100000001 Set B = h1 1110111111100110110101011110001001 Set C = h2 10011000101110101101110011111111 Set D = h3 0001000000110010010101010001110110 Set E = h4 110000111101001011110000111110000

Word 0

00010000001100100101010001110110 :!B 00010000001100100101010001110110 :D

!B AND D 00010000001100100101010001110110 :Out

111011111100110110101011110001001 :B 10011000101110101101110011111110 :C

B AND C 10001000100010001000100010001000

:(A lrot 5) + F + E + K + Word 0

:temp

111100001011000101100000101100011000

00010000001100100101010001110110:!B AND D 10001000100010001000100010001000:B AND C (!B AND D) OR (B AND C) 100110001011101011011100111111110:F 01011010100000100111100110011001:K 11101000101001000110000000101100:A lrot 5 100110001011101011011100111111110:F :(A lrot 5) + F11000000101011111100111110100101010:Out 11000000101011111100111110100101010 :(A lrot 5) + F110000111101001011100001111110000:(A lrot 5) + F + E1001000101001100100001111100011010:Out 1001000101001100100001111100011010:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K110100111111101101001001100010110011:Out 110100111111101101001001100010110011:(A lrot 5) + F + E + K011010110110000101111001001100101:Word 0

00001011000101100000101100011000:truncated temp 00010000001100100101010001110110100110001011101011011100111111110:D=C0111101111111001101101010111100010:C = B Left Rotate 3001100111010001010010001100000001:B = A00001011000101100000101100011000:A = TempWord 1 1001100010111010110111100111111110 100110001011101011011100111111110:D !B AND D 1001100010111010110111100111111110 :Out 01100111010001010010001100000001:B 0111101111111001101101010111100010B AND C 011000110100000100100010000000000:Out 1001100010111010110111100111111110:!B AND D 011000110100000100100010000000000:B AND C (!B AND D) OR (B AND C) :F 01011010100000100111100110011001:K

01100010110000010110001100000001

:A lrot 5

:F

:(A lrot 5) + F101011110101111010110000111111111 :Out 101011110101111010110000111111111 :(A lrot 5) + F00010000001100100101010001110110:E :(A lrot 5) + F + E11011011101110111111011011001110101 :Out 1101101110111011111011011001110101 :(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K1111110010010111100100011000000001110:Out 111110010010111100100011000000001110:(A lrot 5) + F + E + K01100101011011011010010000010000000:Word 1 :(A lrot 5) + F + E + K + W ord 11000001011101101111110101000010001110:temp 001011101101111110101000010001110:truncated temp 100110001011101011011100111111110:E = D0111101111111001101101010111100010:D = C01011001110100010100100011000000:C = B Left Rotate 3000001011000101100000101100011000:B = A001011101101111110101000010001110:A = Temp

Word 2

11110100111010011111010011100111

:!B

0111101111110011011010111100010 :D	
!B AND D 01110000111000010110000011100010 :Out	
00001011000101100000101100011000 :B 01011001110100010100100011000000 :C	
B AND C 000010010001000000010000000000000000	
01110000111000010110000011100010 :!B AND D 000010010001000000001000000000000000	
(!B AND D) OR (B AND C) 01111001111100010110100011100010 :F	
01011010100000100111100110011001	
:K 11011011111010100001000111000101	
:A lrot 5 01111001111100010110100011100010 :F	
:(A lrot 5) + F 101010101110110110111101010100111 :Out	
101010101110110110111101010100111	
:(A lrot 5) + F 10011000101110101101110011111110 :E	
:(A lrot 5) + F + E 111110111010010110010111110100101 :Out	
11111011101001011001010111110100101 :(A lrot 5) + F + E 01011010100000100111100110011 :K	

:(A lrot 5) + F + E + K 10001001001000110001101000100111110 :Out	
10001001001000110001101000100111110 :(A lrot 5) + F + E + K 00000000000000000000000000000000000	
:(A lrot 5) + F + E + K + Word 2 110001001001000110001101000100111110 :temp	
01001001000110001101000100111110 :truncated temp 01111011111110011011010111100010 :E = D 010110011101000101001000110000000 :D = C 00000010110001011000001011000110 :C = B Left Rotate 30 00101110110111111010100001001110 :B = A 01001001000110001101000100111110 :A = Temp	
Word 3	
11010001001000001010111101110001 :!B 01011001110100010100100011000000 :D	
!B AND D 010100010000000000100001000000 :Out	
00101110110111110101000010001110 :B 00000010110001011000001011000110 :C	

B AND C 0000001011000101000000010000110 :Out

0000001011000101000000010000110:B AND C (!B AND D) OR (B AND C) 01010011110001010000100011000110:F 01011010100000100111100110011001:K 001000110001101000100111111001001:A lrot 5 01010011110001010000100011000110:F :(A lrot 5) + F1011101101101111110011000010001111 :Out 1011101101101111110011000010001111 :(A lrot 5) + F0111101111111001101101010111100010:E :(A lrot 5) + F + E111111100101101001010011011011101110001 :Out 11111110010110100101001101101101110001:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K10001001101010101010001010100001010:Out 10001001101010101010001010100001010:(A lrot 5) + F + E + K:Word 3 :(A lrot 5) + F + E + K + W ord 3110001001101010101010001010100001010

 $\begin{array}{l} 01001101010101010001010100001010 \\ :truncated\ temp \\ 01011001110100010100100011000000 \\ :E=D \end{array}$

:temp

00000010110001011000001011000110	
:D = C	
10001011101101111101010000100011 :C = B Left Rotate 30	
01001001000110001101000100111110	
:B=A	
01001101010101010001010100001010	
:A = Temp	
Word 4	
10110110111001110010111011000001	
:!B	
00000010110001011000001011000110	
:D	
!B AND D	
00000010110001010000001011000000	
:Out	
01001001000110001101000100111110	
:B	
10001011101101111101010000100011	
:C	 _
B AND C	
00001001000100001101000000100010	
:Out	
00000010110001010000001011000000	
:!B AND D	
00001001000100001101000000100010 :B AND C	
.D AND C	 _
(!B AND D) OR (B AND C)	
000010111101010111101001011100010	
:F	
01011010100000100111100110011001	
:K 10101010101000101010000101001001	
:A lrot 5	
00001011110101011101001011100010	
:F	
:(A lrot 5) + F	
110110110011110000111010000101011	
:Out	

1101101100111110000111010000101011:(A lrot 5) + F01011001110100010100100011000000:(A lrot 5) + F + E1000010000010010011011110011101011:Out 1000010000010010011011110011101011:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K11001101010110011000011011010000100:Out 11001101010110011000011011010000100:(A lrot 5) + F + E + K:Word 4 :(A lrot 5) + F + E + K + W ord 4111001101010110011000011011010000100:temp 01101010110011000011011010000100:truncated temp 00000010110001011000001011000110:E=D100010111011011111101010000100011 :D=C10010010010001100011010001001111:C = B Left Rotate 30 01001101010101010001010100001010:B = A01101010110011000011011010000100:A = TempWord 5 1011001010101010111101010111110101 :!B 100010111011011111101010000100011 :D !B AND D 100000101010000101100000000100001

:Out

01001101010101010001010100001010 :B 1001001001000110001	
B AND C 0000000010001000001010000001010 :Out	
10000010101000101100000000100001 :!B AND D 0000000010001000001010000001010 :B AND C	
(!B AND D) OR (B AND C) 100000101110011011010000101011 :F	
01011010100000100111100110011001	
:K 01011001100001101101000010001101	
:A lrot 5 100000101110011011010000101011 :F	
:(A lrot 5) + F 1110111000110110110100100101111000 :Out	
1110111000110110110100100101111000	
:(A lrot 5) + F 00000010110001011000001011000110 :E	
:(A lrot 5) + F + E 1111011111001100110010011101111110 :Out	
1111011111001100110010011101111110 :(A lrot 5) + F + E 01011010100000100111100110011 :K	
:(A lrot 5) + F + E + K 100001110011011010101000100010111 :Out	

100001110011011011010000100010111 :(A lrot 5) + F + E + K 00000000000000000000000000000000000	
:(A lrot 5) + F + E + K + Word 5 1100001110011011010101000100010111 :temp	
00111001101101101010000100010111 :truncated temp 10001011101101111101010000100011 :E = D 10010010010001100011010001001111 :D = C 100100110101010101010101000010 :C = B Left Rotate 30 01101010110110011000011011010000100 :B = A 0011100110110110110100001001111 :A = Temp	
Word 6	
10010101001100111100100101111011 :!B 10010010010001100011010001001111 :D	
!B AND D 10010000000010000000001001011 :Out	
01101010110011000011011010000100 :B 100100110101010101010101000101 :C	
B AND C 0000001001000100000001000000000000000	
10010000000010000000001001011 :!B AND D 000000100100010000000100000000000000	
(!B AND D) OR (B AND C) 1001001001000110000001000100111	

:F

:(A lrot 5) + F 111001000111110100010011100110010 :Out

111001000111110100010011100110010 :(A lrot 5) + F 100010111011011111101010000100011 ·E.

:(A lrot 5) + F + E 10010101010101110001111110110101011 :Out

1001010100101100011111110110101011:(A lrot 5) + F + E
01011010100000100111100110011001:K

:(A lrot 5) + F + E + K 110101011111001101000111010011101110 :Out

:(A lrot 5) + F + E + K + Word 6111010101111001101000111010011101110 :temp

 $\begin{array}{l} 10101111001101000111010011101110 \\ :truncated\ temp \\ 10010010010001100011010001001111 \\ :E = D \\ 1001001101010101010100010101000010 \\ :D = C \\ 00011010101100110000110110100001 \\ :C = B\ Left\ Rotate\ 30 \\ 001110011011011011011010000100010111 \\ :B = A \end{array}$

:(A lrot 5) + F + E

Word 7	
11000110010010100101111011101000	
:!B 10010011010101010100010101000010 :D	
!B AND D 10000010010000000100010001000000 :Out	
00111001101101011010000100010111 :B	
.B 00011010101100110000110110100001 :C	
B AND C 0001100010110001000000100000001 :Out	
10000010010000000100010001000000	
:!B AND D 00011000101100010000000100000001 :B AND C	
(!B AND D) OR (B AND C) 10011010111100010100010101000001 :F	
01011010100000100111100110011001 :K	
.N 11100110100011101001110111010101 :A lrot 5	
10011010111100010100010101000001 :F	
:(A lrot 5) + F 11000000101111111111110001100010110 :Out	
11000000101111111111110001100010110	
:(A lrot 5) + F 10010010010001100011010001001111 :E	

1000010011110001100001011101100101 :Out

1000010011110001100001011101100101 :(A lrot 5) + F + E 01011010100000100111100110011001 :K

:(A lrot 5) + F + E + K 11001101110010010001001000011111110 :Out

:(A lrot 5) + F + E + K + Word 7 111001101110010010001001000011111110 :temp

 $\begin{array}{l} 0110111001001001001000011111110 \\ :truncated\ temp \\ 1001001101010101010100010101000010 \\ :E=D \\ 00011010101101100110000110110100001 \\ :D=C \\ 110011100110110110110100001000101 \\ :C=B\ Left\ Rotate\ 30 \\ 101011110011010001110100011101101 \\ :B=A \\ 0110111001001001000100100011111110 \\ :A=Temp \end{array}$

Word 8

01010000110010111000101100010001 :!B 00011010101100110000110110100001 :D

!B AND D 00010000100000110000100100000001 :Out

B AND C 1000111000100110000001000100 :Out	
00010000100000110000100100000001 :!B AND D 10001110001001000110000001000100 :B AND C	
(!B AND D) OR (B AND C) 10011110101001110110100101000101 :F	
0101101010000010011110011001	
:K 11001001000100100001111111001101	
:A lrot 5 10011110101001110110100101000101 :F	
:(A lrot 5) + F 10110011110111001100010010010010 :Out	
10110011110111001100010010010010	
:(A lrot 5) + F 10010011010101010100010101000010 :E	
:(A lrot 5) + F + E 1111111011000011101100111001010100 :Out	
1111111011000011101100111001010100	
:(A lrot 5) + F + E 0101101010000010011110011001 :K	
:(A lrot 5) + F + E + K 10001010101100100010100011111101101 :Out	
10001010101100100010100011111101101 :(A lrot 5) + F + E + K 00000000000000000000000000000000000	
:(A lrot 5) + F + E + K + Word 8	

1100010101011001000101000111111101101:temp 010101011001000101000111111101101:truncated temp 00011010101100110000110110100001:E=D11001110011011010110100001000101:D=C10101011110011010001110100111011 :C = B Left Rotate 30011011100100100010010000111111110:B = A01010101100100010100011111101101:A = TempWord 9 100100011011011101101111100000001 :!B 11001110011011010110100001000101 :D !B AND D 1000000001001010110100000000001 :Out 011011100100100010010000111111110101010111110011010001110100111011:C B AND C 00101010010010000001000000111010:Out 1000000001001010110100000000001:!B AND D 00101010010010000001000000111010:B AND C (!B AND D) OR (B AND C) 101010100110110101111100000111011 :F

01011010100000100111100110011001 :K 10110010001010001111110110101010 :A lrot 5 101010100110110101111100000111011:F :(A lrot 5) + F101011100100101100111010111100101 :Out 101011100100101100111010111100101:(A lrot 5) + F00011010101100110000110110100001:Е :(A lrot 5) + F + E11011101110100100110000001110000110:Out 11011101110100100110000001110000110:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K1111101000111001011111111110100011111 :Out 1111101000111001011111111110100011111 :(A lrot 5) + F + E + K:Word 9 :(A lrot 5) + F + E + K + Word 9111111101000111001011111111110100011111:temp 110100011100101111111110100011111 :truncated temp 110011100110110110110100001000101:E = D10101011110011010001110100111011 :D = C10011011100100100010010000111111 :C = B Left Rotate 3001010101100100010100011111101101:B = A110100011100101111111110100011111

:A = Temp

10101010011011101011100000010010 :!B 10101011110011010001110100111011 :D	
!B AND D 10101010010011000001100000010010 :Out	
0101010100100010100011111101101 :B	
10011011100100100010010000111111 :C	
B AND C 0001000110010000000010000101101 :Out	
10101010010011000001100000010010 :!B AND D 0001000110010000000010000101101 :B AND C	
(!B AND D) OR (B AND C) 101110111101110000011110000111111 :F	
01011010100000100111100110011001 :K	
0011100101111111110100011111111010 :A lrot 5	
101110111101110000011110000111111 :F	
:(A lrot 5) + F 1111101010101101111100000000111001 :Out	
1111101010101101111100000000111001 :(A lrot 5) + F	
1100111001101101010100001000101 :E	
:(A lrot 5) + F + E 101100001111001001010100001111110 :Out	
1011000011110010010010100001111110	

:(A lrot 5) + F + E

:K	
:(A lrot 5) + F + E + K 11100011110010010111010001000010111 :Out	
11100011110010010111010001000010111 :(A lrot 5) + F + E + K 00000000000000000000000000000000000	
:(A lrot 5) + F + E + K + Word 10 111100011110010010111010001000010111 :temp	
00011110010010111010001000010111 :truncated temp 10101011110011010001110100111011 :E = D 10011011100100100010010000111111 :D = C 010101010101001000101000111111011 :C = B Left Rotate 30 11010001110010111111111110100011111	
:B = A 00011110010010111010001000010111 :A = Temp	
Word 11	
00101110001101000000001011100000 :!B 10011011100100100010010000111111 :D	
!B AND D 00001010000100000000000000000000000	
110100011100101111111110100011111 :B 01010101011001000101000111111011 :C	
B AND C 01010001010000000101000100011011	

:Out

00001010000100000000000000000000000000	
(!B AND D) OR (B AND C) 0101101101000000101000100111011 :F	
01011010100000100111100110011001 :K	
11001001011101000100001011100011 :A lrot 5	
01011011010100000101000100111011 :F	
:(A lrot 5) + F 1001001001100010010010010000011110 :Out	
1001001001100010010010010000011110 :(A lrot 5) + F 10101011110011010001110100111011 :E	
:(A lrot 5) + F + E 1111010000100100011011000101011001 :Out	
1111010000100100011011000101011001 :(A lrot 5) + F + E 01011010100000100111100110011 :K	
:(A lrot 5) + F + E + K 10000101011000101000010101011110010 :Out	
10000101011000101000010101011110010 :(A lrot 5) + F + E + K 00000000000000000000000000000000000	
:(A lrot 5) + F + E + K + Word 11 110000101011000101000010101011110010 :temp	

001010110001010000101010111110010 :truncated temp

10011011100100100010010000111111	
:E = D $010101011001000101000111111011$	
:D=C	
1111010001110010111111111101000111	
:C = B Left Rotate 30 00011110010010111010001000010111	
:B=A	
00101011000101000010101011110010 :A = Temp	
Word 12	
11100001101101000101110111101000 :!B	
01010101011001000101000111111011 :D	
!B AND D	
01000001001001000101000111101000 :Out	
00011110010010111010001000010111	
:B 111101000111001011111111101000111 :C	
B AND C 00010100010000101010000000111 :Out	
01000001001001000101000111101000	
:!B AND D 00010100010000101010001000000111 :B AND C	
(!B AND D) OR (B AND C) 010101010110011011111001111101111 :F	
01011010100000100111100110011001 :K	
01100010100001010101111001000101	
:A lrot 5 01010101011001101111001111101111 :F	
:(A lrot 5) + F 1101101111111011000101001000110100 :Out	

1101101111111011000101001000110100:(A lrot 5) + F10011011100100100010010000111111:(A lrot 5) + F + E10010100110111111100111011001110011:Out 10010100110111111100111011001110011:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K110101011110000000001111000000001100:Out 110101011110000000001111000000001100:(A lrot 5) + F + E + K:Word 12 :(A lrot 5) + F + E + K + W ord 121110101011110000000001111000000001100:temp 10101110000000001111000000001100:truncated temp 010101010110010001010001111111011:E=D1111010001110010111111111101000111 :D = C110001111001001011110100010000101:C = B Left Rotate 30001010110001010000101010111110010:B = A10101110000000001111000000001100:A = TempWord 13 110101001110101111101010100001101 1111010001110010111111111101000111 :D

!B AND D

:Out	
0010101100010100001010111110010 :B 1100011110010010111010001000010	
B AND C 00000011000100000010100010000000 :Out	
11010100011000101101010100000101 :!B AND D 00000011000100000010100010000000 :B AND C	
(!B AND D) OR (B AND C) 11010111011100101111110110000101 :F	
01011010100000100111100110011001	
:K 110000000011110000000110010101	
:A lrot 5 11010111011100101111110110000101 :F	
:(A lrot 5) + F 1100101111001000011111111100011010 :Out	
1100101111001000011111111100011010	
:(A lrot 5) + F 01010101011001000101000111111011 :E	
:(A lrot 5) + F + E 1111101100111101010101000100010101 :Out	
1111101100111101010101000100010101 :(A lrot 5) + F + E 01011010100000100111100110011001 :K	
:(A lrot 5) + F + E + K 100010001110111011111001010101011110 :Out	

11010100011000101101010100000101

100010001110111011111100101010101011110:(A lrot 5) + F + E + K:Word 13 :(A lrot 5) + F + E + K + W ord 131100010001110111011111100101010101011110:temp 0100011101110111111001010101011110:truncated temp 1111010001110010111111111101000111 :E = D110001111001001011110100010000101 :D = C100010101100010100001010101111100:C = B Left Rotate 3010101110000000001111000000001100:B = A0100011101110111111001010101011110:A = TempWord 14 010100011111111111000011111111110011:!B 110001111001001011110100010000101 !B AND D 01000001100100100000100010000001:Out 10101110000000001111000000001100100010101100010100001010101111100:C B AND C 10001010000000000000000000001100:Out 01000001100100100000100010000001:!B AND D 10001010000000000000000000001100:B AND C

(!B AND D) OR (B AND C)

11001011100100100000100010001101 :F 010110101000001001111001100110011110111011111100101010101111001000 :A lrot 5 11001011100100100000100010001101:F :(A lrot 5) + F1101110101000101101011111001010101 :Out 1101110101000101101011111001010101 :(A lrot 5) + F1111010001110010111111111101000111 :Е :(A lrot 5) + F + E1010101110111111111001011110110011100:Out 1010101110111111111001011110110011100:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K11100001001100000001101011100110101:Out 11100001001100000001101011100110101 :(A lrot 5) + F + E + K:Word 14 :(A lrot 5) + F + E + K + Word 14111100001001100000001101011100110101:temp

 $\begin{array}{l} 00001001100000001101011100110101\\ :truncated\ temp\\ 110001111001001011110100010000101\\ :E=D\\ 100010101100010100001010101111100\\ :D=C\\ 0010101111000000000011110000000011\\ :C=B\ Left\ Rotate\ 30 \end{array}$

01000111011101111100101010101110 :B = A 00001001100000001101011100110101 :A = Temp	
Word 15	
10111000100010000011010101010001 :!B 10001010110001010000101010111100 :D	
!B AND D 100010001000000000000000000000000000	
01000111011101111100101010101110 :B 001010111100000000011110000000011 :C	
B AND C 0000001100000000000100000000010 :Out	
10001000100000000000000000000000000000	
(!B AND D) OR (B AND C) 100010111000000000010000010010 :F	
01011010100000100111100110011001 :K 00110000000110101110011010100001 :A lrot 5 1000101110000000000000000000000000000	
:(A lrot 5) + F 110111011100110101110111010110011 :Out	

11011101110011010111011101110110011 :(A lrot 5) + F 11000111100100101110100010000101

:Е

:(A lrot 5) + F + E 1010000011001011011101011100111000 :Out

1010000011001011011101011100111000 :(A lrot 5) + F + E 01011010100000100111100110011001 :K

:(A lrot 5) + F + E + K 11011011101101100000101000011010001 :Out

110110111011011010000101000011010001 :(A lrot 5) + F + E + K 000000000000000000000000000111000 :Word 15

:(A lrot 5) + F + E + K + Word 15 11101101110110110000010100010001001 :temp

 $\begin{array}{l} 11011101101100000101000100001001\\ :truncated\ temp\\ 100010101100010100001010101111100\\ :E=D\\ 0010101111000000000011110000000011\\ :D=C\\ 10010001110111011111110010101010101\\ :C=B\ Left\ Rotate\ 30\\ 00001001100100000001101011100110101\\ :B=A\\ 110111011011000000101000100001001\\ :A=Temp\\ \end{array}$

Word 16

!B AND D 0010001000000000010100000000010 :Out

00001001100000001101011100110101

:B

100100011101111111001010101011 :C	
B AND C 00000001100000001101001000100001 :Out	
0010001000000000010100000000010 :!B AND D 00000001100000001101001000100001 :B AND C	
(!B AND D) OR (B AND C) 00100011100000001111101000100011 :F	
01011010100000100111100110011	
:K 1011011000001010001000111011	
:A lrot 5 00100011100000001111101000100011 :F	
:(A lrot 5) + F 111011001100010110001101101011110 :Out	
111011001100010110001101101011110 :(A lrot 5) + F 1000101011000101000010101111100 :E	
:(A lrot 5) + F + E 1001100100010100000010011000011010 :Out	
1001100100010100000010011000011010 :(A lrot 5) + F + E 01011010100000100111100110011 :K	
:(A lrot 5) + F + E + K 11010111110110100101001111110110011 :Out	
11010111110110100101001111110110011 :(A lrot 5) + F + E + K	

11010110110000101110010011001010

:Word 16

:(A lrot 5) + F + E + K + W ord 161111110010101100101011000010001111101:temp 10010101100101011000010001111101:truncated temp 001010111100000000011110000000011:E=D100100011101110111111001010101011:D=C01000010011000000011010111001101:C = B Left Rotate 3011011101101100000101000100001001:B = A10010101100101011000010001111101 :A = TempWord 17 00100010010011111010111011110110100100011101110111111001010101011 :D !B AND D 00000000010011011010001010100010:Out 11011101101100000101000100001001 01000010011000000011010111001101:C B AND C 0100000001000000001000100010001:Out 0000000010011011010001010100010:!B AND D 0100000001000000001000100010001:B AND C

(!B AND D) OR (B AND C) 010000000110110110110111010111 :F

01011010100000100111100110011001

:K

101100101011000010001111110110010 :A lrot 5 01000000011011011011001110101011:(A lrot 5) + F111110011000111100100001101011101 :Out 111110011000111100100001101011101:(A lrot 5) + F001010111100000000011110000000011:E :(A lrot 5) + F + E100001111010011111001111111101100000:Out 100001111010011111001111111101100000 :(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K1100111100100100000111111000111111001 :Out 110011110010010000011111100011111001:(A lrot 5) + F + E + K110010101101101101001000011000000000:Word 17 :(A lrot 5) + F + E + K + W ord 17111101000011111111011001111001111111001:temp 01000011111111011001110011111111001:truncated temp 100100011101110111111001010101011:E = D01000010011000000011010111001101:D = C01110111011011000001010001000010:C = B Left Rotate 3010010101100101011000010001111101 :B = A01000011111111011001110011111111001:A = Temp

0110101001101010111101110000010 :!B 01000010011000000011010111001101 :D	
!B AND D 01000010011000000011000110000000 :Out	
10010101100101011000010001111101 :B 01110111011011000001010001000010	
B AND C 00010101000001000000100010000000 :Out	
01000010011000000011000110000000 :!B AND D 0001010100000100000010001000000 :B AND C	
(!B AND D) OR (B AND C) 01010111011001000011010111000000 :F	
01011010100000100111100110011001 :K	
01111111011001110011111100101000 :A lrot 5	
01010111011001000011010111000000 :F	
:(A lrot 5) + F 111010110110010110111010011101000 :Out	
111010110110010110111010011101000 :(A lrot 5) + F 1001000111011110111111001010101011 :E	
:(A lrot 5) + F + E 1001101000101010010110011110010011 :Out	

1001101000101010010110011110010011 :(A lrot 5) + F + E 0101101010000010011110011001 :K	
:(A lrot 5) + F + E + K 1101100001100101111110000100101100 :Out	
110110000110010101111110000100101100 :(A lrot 5) + F + E + K 0000000000000000000000001110000 :Word 18	
:(A lrot 5) + F + E + K + Word 18 11101100001100101111110000110011100 :temp	
11000011001010111110000110011100 :truncated temp 01000010011000000011010111001101 :E = D 01110111011011010000101000100010 :D = C 011001010101010101010000100011111 :C = B Left Rotate 30 01000011111110110011100111111001 :B = A 110000110010101111110000110011100 :A = Temp	
Word 19	
10111100000001001100011000000110 :!B 01110111011011000001010001000010 :D	
!B AND D 00110100000010000001000000010 :Out	
01000011111110110011100111111001 :B 01100101011001010110000100011111 :C	
B AND C 010000010110000100010001	

:Out

0011010000000100000010000000010:!B AND D 01000001011000010010000100011001:B AND C (!B AND D) OR (B AND C) 01110101011001010010010100011011:F 01011010100000100111100110011001011001010111111000011001110011000:A lrot 5 01110101011001010010010100011011:(A lrot 5) + F1110110101111000010101100010110011:Out 111011010111000010101100010110011:(A lrot 5) + F01000010011000000011010111001101:Е :(A lrot 5) + F + E1000011101010000011000111010000000:Out 1000011101010000011000111010000000:(A lrot 5) + F + E01011010100000100111100110011001:K :(A lrot 5) + F + E + K110011101111110001000000100000011001:Out 110011101111110001000000100000011001:(A lrot 5) + F + E + K101011011000010111100100110010101 :Word 19 :(A lrot 5) + F + E + K + W ord 19

111100100101010010011101000110101110

:temp

00100101010010011101000110101110 :truncated temp	
01110111011011000001010001000010 :E = D	
01100101011001011110000100011111	
:D = C 01010000111111101100111001111110	
:C = B Left Rotate 30 1100001100101111110000110011100	
:B=A	
00100101010010011101000110101110 :A = Temp	
Word 20	
110000110010101111110000110011100 :B	
:B 01010000111111101100111001111110 :C	
B XOR C	
100100111101010100101111111100010 :Out	
100100111101010100101111111100010	
:B XOR C 011001011001011010000100011111	
:D	
(B XOR C) XOR D 11110110101100000100111011111101 :F	
01101110110110011110101110100001	
:K	
10101001001110100011010111000100 :A lrot 5	
11110110101100000100111011111101 :F	
:(A lrot 5) + F	
110011111111010101000010011000001 :Out	
1100111111111010101000010011000001 :(A lrot 5) + F	
.(A not 3) + F 01110111011011000001010001000010 :E	
:(A lrot 5) + F + E	

1000010111010101101001100100000011 :Out

1000010111010101101001100100000011 :(A lrot 5) + F + E 01101110110110011110101110100001 :K

:(A lrot 5) + F + E + K 11010000110001100001000010010100100 :Out

11010000110001100001000010010100100 :(A lrot 5) + F + E + K 10010101101101001000001000000001 :Word 20

:(A lrot 5) + F + E + K + Word 20 1111000110111111001010000011010100101 :temp

 $\begin{array}{l} 000110111111001010000011010100101\\ :truncated\ temp\\ 011001010101100101110000100011111\\ :E=D\\ 010100001111111011001110011111110\\ :D=C\\ 00110000110010101011111100001100111\\ :C=B\ Left\ Rotate\ 30\\ 0010010101010010011101000011011110\\ :B=A\\ 00011011111100101000001101010101\\ :A=Temp\\ \end{array}$

Word 21

001001010100100111101000110101110 :B 001100001100101011111100001100111 :C

B XOR C 000101011001000111001001 :Out

00010101100000110010100111001001 :B XOR C 010100001111111101100111001111110 :D

(B XOR C) XOR D 010001010111111011110011110110111:F 011011101101100111101011110100001011111100101000001101010010100011:A lrot 5 010001010111111011110011110110111:F :(A lrot 5) + F111000010000111101011110001011010:Out 111000010000111101011110001011010:(A lrot 5) + F01100101011001010110000100011111:Е :(A lrot 5) + F + E1000100111100001000001110101111001:Out 10001001111000010000011101011111001:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K110100101100101111100000100100011010:Out 110100101100101111100000100100011010:(A lrot 5) + F + E + K0000000000000000000000011100000:Word 21 :(A lrot 5) + F + E + K + Word 2111101001011001011111000001001111111010

 $\begin{array}{l} 1001011001011111000001001111111010 \\ :truncated\ temp \\ 0101000011111111011001110011111110 \\ :E=D \\ 001100001100101011111100001100111 \\ :D=C \end{array}$

:temp

10001001010100100111010001101011 :C = B Left Rotate 30 000110111111001010000011010100101 :B = A 100101100101111100000100111111010 :A = Temp	
Word 22	
00011011111001010000011010100101 :B 10001001010100100111010001101011 :C	
B XOR C 100100101101110111001011001110 :Out	
10010010101101110111001011001110 :B XOR C 001100001100101011111100001100111 :D	
(B XOR C) XOR D 101000100111110110001010101010101 :F	
01101110110110011110101110100001 :K 1100101111100000100111111101010010 :A lrot 5 10100010011111011000101010101001 :F	
:(A lrot 5) + F 101101110001111101100100111111011 :Out	
101101110001111101100100111111011 :(A lrot 5) + F 010100001111111101100111001111110 :E	
:(A lrot 5) + F + E 11101111111001111011001100001111001 :Out	
1110111111001111011001100001111001	

:(A lrot 5) + F + E

01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 1000010111000010111100001000011010 :Out	
10000101110000101111000010000011010 :(A lrot 5) + F + E + K 0101101100001011100100110010111 :Word 22	
:(A lrot 5) + F + E + K + Word 22 110010001001001000110001011101000101 :temp	
$ \begin{array}{l} 10001001001001000110001011101000101 \\ : truncated temp \\ 001100001100101011111100001100111 \\ : E = D \\ 100010010101010010011101000110111 \\ : D = C \\ 010001101111110010100000110101001 \\ : C = B \ Left \ Rotate \ 30 \\ 100101100101111100000100111111010 \\ : B = A \\ 100010010010010001100010111101000101 \\ : A = Temp \\ \end{array} $	
Word 23	
10010110010111100000100111111010 :B	
.B 010001101111110010100000110101001 :C	
B XOR C 11010000101001110100100001010011 :Out	
11010000101001110100100001010011 :B XOR C 10001001010100100111010001101011 :D	
(B XOR C) XOR D 01011001111101010011110000111000 :F	

011011101101100111101011110100001:K 00100100011000101110100010110001:A lrot 5 0101100111111010100111110000111000:F :(A lrot 5) + F1011111110010110000010010011101001:Out 1011111110010110000010010011101001:(A lrot 5) + F001100001100101011111100001100111:E :(A lrot 5) + F + E1110101111100100011000111010101010000:Out 1110101111001000110001110101010000:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K100000111011111111010000100011110001:Out 1000001110111111111010000100011110001:(A lrot 5) + F + E + K00101011011011010010000010001110011:Word 23 :(A lrot 5) + F + E + K + Word 23110001001001011001100000110101100100 :temp 01001001011001100000110101100100:truncated temp 10001001010100100111010001101011:E = D0100011011111100101000001101010101:D=C101001011001011110000010011111110 :C = B Left Rotate 30

10001001001000110001011101000101

01001001011001100000110101100100

:B = A

:A = Temp

Word 24	
10001001001000110001011101000101 :B 10100101100101111000001001111110 :C	
B XOR C 0010110010110100101010111011 :Out	
0010110010110100100101010111011 :B XOR C 010001101111110010100000110101001 :D	
(B XOR C) XOR D 01101010010011011101010010010010 :F	
01101110110110011110101110100001 :K 001011001100000110110110010001001 :A lrot 5 011010100100110111010010010010 :F	
:(A lrot 5) + F 110010111000011111000000100011011 :Out	
110010111000011111000000100011011 :(A lrot 5) + F 10001001010100100111010001101011 :E	
:(A lrot 5) + F + E 1000100000011000011111010110000110 :Out	
1000100000011000011111010110000110 :(A lrot 5) + F + E 01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 110100011110011101111110000100100111 :Out	

1101000111100111011111100001001001111 :(A lrot 5) + F + E + K 10101101100001011100100001010101 :Word 24

:(A lrot 5) + F + E + K + Word 24 11110011110011000001101010101111100 :temp

Word 25

B XOR C 00101011001011101100100010110101 :Out

00101011001011101100100010110101 :B XOR C 101001011001011111000001001111110 :D

(B XOR C) XOR D 10001110101110010100101011001011 :F

011011101101100111101011110100001 :K 100110000011010100101111110000111 :A lrot 5 10001110101110010100101011001011 :F :(A lrot 5) + F 100100110111011100111101001010010 :Out

100100110111011100111101001010010 :(A lrot 5) + F 010001101111110010100000110101001 :E

:(A lrot 5) + F + E 110110110111110011110111011111111011 :Out

1101101101111100111101111111111011 :(A lrot 5) + F + E 01101110110110011110101110100001 :K

:(A lrot 5) + F + E + K 11111011100110000011010011110011100 :Out

11111011100110000011010011110011100 :(A lrot 5) + F + E + K 00100011101000111010010001010111 :Word 25

:(A lrot 5) + F + E + K + Word 25 100000000000011001010101011111110011 :temp

 $\begin{array}{l} 00000000011001010101011111110011 \\ :truncated\ temp \\ 1010010110010111110000010011111110 \\ :E = D \\ 01100010010010010001100010111010001 \\ :D = C \\ 00010010010010110011000001101011001 \\ :C = B\ Left\ Rotate\ 30 \\ 0011110011000001101010101011111100 \\ :B = A \\ 000000000011001010101010101111110011 \\ :A = Temp \end{array}$

Word 26

00010010010110011000001101011001 :C	
B XOR C 00101110100110000010101000100101 :Out	
00101110100110000010101000100101 :B XOR C 01100010010010001100010111010001 :D	
(B XOR C) XOR D 01001100110100001110111111110100 :F	
01101110110110011110101110100001 :K	
00001100101010101111111001100000 :A lrot 5	
010011001101000011101111111110100 :F	
:(A lrot 5) + F 101011001011110100110111001010100 :Out	
101011001011110100110111001010100 :(A lrot 5) + F 10100101100101111000001001111110 :E	
:(A lrot 5) + F + E 11111111111000100011111000011010010 :Out	
1111111111000100011111000011010010 :(A lrot 5) + F + E 01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 1000110111110101111011110001110011 :Out	
10001101101111010111101110001110011 :(A lrot 5) + F + E + K 0101011011010010000010000000110	

:Word 26

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:(A \text{ lrot } 5) + F + E + K + W \text{ ord } 26
1100110001001011111011110010001111001\\
:temp
11000100101111011110010001111001
:truncated temp
01100010010010001100010111010001\\
:E=D
00010010010110011000001101011001\\
:D = C
00001111001100000110101001011111\\
:C = B \text{ Left Rotate } 30
000000000110010101001011111110011\\
:B = A
11000100101111011110010001111001
:A = Temp
Word 27
000000000110010101001011111110011\\
00001111001100000110101001011111\\
B XOR C
00001111010101010010000110101100\\
:Out
00001111010101010010000110101100\\
:B XOR C
00010010010110011000001101011001\\
:D
(B XOR C) XOR D
00011101000011001010001011110101\\
:F
011011101101100111101011110100001
100101111011110010001111100111000\\
:A lrot 5
00011101000011001010001011110101\\
:F
```

:(A lrot 5) + F 110110100110010010011001000101101 :Out 110110100110010010011001000101101:(A lrot 5) + F01100010010010001100010111010001:(A lrot 5) + F + E10000101110001000111110111111111110:Out 10000101110001000111110111111111111:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K110100001011110101111110001110011111 :Out 110100001011110101111110001110011111 :(A lrot 5) + F + E + K0000000000000000000001110000000:Word 27 :(A lrot 5) + F + E + K + W ord 271110100001011110101111110011100011111 :temp 100001011110101111110011100011111:truncated temp 00010010010110011000001101011001:E=D00001111001100000110101001011111:D=C110000000001100101010010111111100:C = B Left Rotate 3011000100101111011110010001111001:B = A100001011110101111110011100011111 :A = TempWord 28 11000100101111011110010001111001 :B 110000000001100101010010111111100 :C B XOR C 00000100101001001011011010000101

:Out

00000100101001001011011010000101:B XOR C 00001111001100000110101001011111(B XOR C) XOR D 00001011100101001101110011011010:F 0110111011011001111010111101000011011110101111110011100011111110000:A lrot 5 00001011100101001101110011011010:(A lrot 5) + F111001001000100011100000011001010:Out 111001001000100011100000011001010:(A lrot 5) + F00010010010110011000001101011001:Е :(A lrot 5) + F + E1111011011011010110100010000100011 :Out 111101101101101101010100010000100011:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K100010010100100010100101111111000100:Out 100010010100100010100101111111000100:(A lrot 5) + F + E + K01101100001011100100110010101101:Word 28 :(A lrot 5) + F + E + K + W ord 28

1100101101100111001101111110001110001

:temp

101101100111001101111110001110001 :truncated temp 000011110011000001101010101011111 :E = D 11000000000011001010101011111100 :D = C 01110001001011110111100100011110 :C = B Left Rotate 30 100001011110111110011100011111 :B = A 1011011001110011101111110001110001 :A = Temp	
Word 29	
10000101111010111110011100011111 :B	
.B 01110001001011110111100100011110 :C	
B XOR C 11110100110001001001111000000001 :Out	
111101001100010010011111000000001 :B XOR C 110000000001100101010010111111100 :D	
(B XOR C) XOR D 00110100110111011100110011111101 :F	
01101110110110011110101110100001	
:K 11001110011011111000111000110110	
:A lrot 5 00110100110111011100110011111101 :F	
:(A lrot 5) + F 1000000110100110101101100110011 :Out	
100000011010011010110110110011 :(A lrot 5) + F 00001111001100000110101001011111 :E	
:(A lrot 5) + F + E	

1100010010011111011100010110010010 :Out

11000100100111111011100010110010010 :(A lrot 5) + F + E 01101110110110011110101110100001 :K

:(A lrot 5) + F + E + K 11110000001010101111011000100110011 :Out

111100000010101011111011000100110011 :(A lrot 5) + F + E + K 10101101101001000001000110111100 :Word 29

:(A lrot 5) + F + E + K + Word 29 100000101110111110111100001011101111 :temp

 $\begin{array}{l} 001011101111110111100001011101111 \\ :truncated\ temp \\ 11000000000011001010101010111111100 \\ :E=D \\ 0111000100101111101111100100011110 \\ :D=C \\ 111000010111110111111001111000111 \\ :C=B\ Left\ Rotate\ 30 \\ 1011011001110011101111110001110001 \\ :B=A \\ 001011101111111111111000010111111 \\ :A=Temp \end{array}$

Word 30

B XOR C 01010111000010011000010110110110 :Out

01010111000010011000010110110110 :B XOR C 01110001001011110111100100011110 :D

(B XOR C) XOR D 001001100010011011111110010101000:F 01101110110110011110101111010000111011111011110000101110111100101 :A lrot 5 001001100010011011111110010101000:F :(A lrot 5) + F100000101100111110101101010001101:Out 100000101100111110101101010001101 :(A lrot 5) + F110000000001100101010010111111100:Е :(A lrot 5) + F + E1111000101101110001010110110110001001:Out 1111000101101110001010110110001001:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K100001101001001001011001100100101010:Out 10000110100100100101001100100101010:(A lrot 5) + F + E + K00011011100100101110100011000011:Word 30

:(A lrot 5) + F + E + K + Word 30 110001010000001001011000000111101101 :temp

 $\begin{array}{l} 01010000001001011000000111101101\\ \text{:truncated temp}\\ 011100010010111110111100100011110\\ \text{:}E = D\\ 11100001011111011111100111000111\\ \text{:}D = C \end{array}$

011011011001110011011111100011100 :C = B Left Rotate 30 0010111011111011111000010111101111 :B = A 01010000001001011000000111101101 :A = Temp	
Word 31	
00101110111110111100001011101111 :B 01101101100111001	
B XOR C 010000110110011100011101111110011 :Out	
01000011011001110001110111110011 :B XOR C 11100001011110101111100111000111 :D	
(B XOR C) XOR D 10100010000111011110010000110100 :F	
01101110110110011110101110100001 :K 000001001011000000111101101010 :A lrot 5 10100010000111011110010000110100 :F	
:(A lrot 5) + F 110100110110011100010000111011110 :Out	
110100110110011100010000111011110 :(A lrot 5) + F 01110001001011110111100100011110 :E	
:(A lrot 5) + F + E 1000010111111111110110011010111111100 :Out	
100001011111111110110011010111111100	

:(A lrot 5) + F + E

01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 11010000110110101111000011010011101 :Out	
11010000110110101111000011010011101 :(A lrot 5) + F + E + K 00011011001110100001001111001101 :Word 31	
:(A lrot 5) + F + E + K + Word 31 11101010001000010001100110101010 :temp	
$ \begin{array}{l} 1010001000010001100110100110100\\ :truncated\ temp\\ 111000010111110101111100111000111\\ :E=D\\ 0110110110011100111001101111100011100\\ :D=C\\ 110010111011111101111000010111011\\ :C=B\ Left\ Rotate\ 30\\ 010100000010010101100000011110110\\ :B=A\\ 10100010000100011001101001101001\\ :A=Temp $	
Word 32	
01010000001001011000000111101101	
:B 11001011101111101111000010111011 :C	
B XOR C 1001101110011011011100010101010 :Out	
1001101110011011011100010101010 :B XOR C 011011011001110011011111100011100 :D	
(B XOR C) XOR D 11110110000001111010111001001010 :F	

011011101101100111101011110100001:K 0100001000110011010011010101010100:A lrot 5 11110110000001111010111001001010 :F :(A lrot 5) + F100111000001110101111101110011110:Out 100111000001110101111101110011110:(A lrot 5) + F1110000101111101011111100111000111:E :(A lrot 5) + F + E10000110011011010111111010101100101:Out 10000110011011010111111010101100101 :(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K110100010001000111111110000100000110 :Out 110100010001000111111110000100000110:(A lrot 5) + F + E + K10101101110001100111101010100111:Word 32 :(A lrot 5) + F + E + K + Word 32111100110110010101100101101110101101 :temp 00110110010101100101101110101101 :truncated temp 0110110110011100110111111100011100:E = D110010111011111011111000010111011 :D=C01010100000010010110000001111011:C = B Left Rotate 3010100010000100011001101001101010

:B = A

:A = Temp

00110110010101100101101110101101

Word 33	
101000100001000110011010011010 :B 01010100000010010110000001111011 :C	
B XOR C 11110110000110001111101000010001 :Out	
11110110000110001111101000010001 :B XOR C 11001011101111101111000010111011 :D	
(B XOR C) XOR D 001111011010011000001010101010 :F	
01101110110110011110101110100001 :K 1100101011001011011101011010	
:(A lrot 5) + F 100001000011100011000000001010000 :Out	
100001000011100011000000001010000 :(A lrot 5) + F 011011011001110011011111100011100 :E	
:(A lrot 5) + F + E 1101110110000011100101111101101100 :Out	
110111011000001110010111110110100 :(A lrot 5) + F + E 01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 11111100100111010000100101100001101 :Out	

11111100100111010000100101100001101
:(A lrot 5) + F + E + K
101111101101110110001000000000010
:Word 33
:(A lrot 5) + F + E + K + Word 33
100010100011110001011101001100001111
:temp

 $\begin{array}{l} 10100011110001011101001100001111 \\ :truncated\ temp \\ 110010111011111101111000010111011 \\ :E = D \\ 010101000000010010110000001111011 \\ :D = C \\ 101010001000010001100110100110101 \\ :C = B\ Left\ Rotate\ 30 \\ 0011011001010101100101101101101 \\ :B = A \\ 101000111100010111010011001100001111 \\ :A = Temp \end{array}$

Word 34

B XOR C 10011110110100100011110100110111 :Out

10011110110100100011110100110111 :B XOR C 01010100000010010110000001111011 :D

(B XOR C) XOR D 110010101101101101011101001100 :F

01101110110110011110101110100001 :K 01111000101110100110000111110100 :A lrot 5 1100101011011011011011101001100 :F :(A lrot 5) + F1010000111001010110111111101000000:Out 1010000111001010110111111101000000 :(A lrot 5) + F110010111011111011110000101111011 :E :(A lrot 5) + F + E:Out 10000011110101010010101111111111111111 :(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K11001111111000101111010011011110011100 :Out :(A lrot 5) + F + E + K10110000101110010011001101110101:Word 34 :(A lrot 5) + F + E + K + Word 341111001011101110011111001111100010001:temp 0010111011100111111001111100010001 :truncated temp 01010100000010010110000001111011:E = D10101000100001000110011010011010 :D = C01001101100101011001011011101011:C = B Left Rotate 3010100011110001011101001100001111 :B = A001011101110011111001111100010001:A = Temp

Word 35

:C	
B XOR C 11101110010100000100010111100100 :Out	
11101110010100000100010111100100 :B XOR C 10101000100001000110011010011010 :D	
(B XOR C) XOR D 01000110110101000010001101111110 :F	
01101110110110011110101110100001 :K 11011100111110011110001000100101 :A lrot 5 01000110110101000010001101111110 :F	
:(A lrot 5) + F 100100011110011100000010110100011 :Out	
100100011110011100000010110100011 :(A lrot 5) + F 01010100000010010110000001111011 :E	
:(A lrot 5) + F + E 1101110111110101110110011000011110 :Out	
1101110111110101110110011000011110 :(A lrot 5) + F + E 01101110110110011110101110100001 :K	
:(A lrot 5) + F + E + K 1111111001101101010101010101111111 :Out	
11111100110101100010101000110111111 :(A lrot 5) + F + E + K 00000000100001110110000010100100	

:Word 35

:(A lrot 5) + F + E + K + W ord 3511111111001110011110001011001001100011:temp 11100111001110001011001001100011:truncated temp 10101000100001000110011010011010:E=D01001101100101011001011011101011:D = C11101000111100010111010011000011:C = B Left Rotate 30001011101110011111001111100010001:B = A11100111001110001011001001100011:A = TempWord 36 0010111011100111111001111100010001111010001111000101111010011000011 B XOR C 110001100001011010111101111010010 :Out 11000110000101101011101111010010:B XOR C 01001101100101011001011011101011:D (B XOR C) XOR D 100010111000001100101101001111001:F 01101110110110011110101111010000111100111000101100100110001111100:A lrot 5 100010111000001100101101001111001:F

:(A lrot 5) + F 10111001010011001011110011011011 :Out

1011100101001100101111100110110101:(A lrot 5) + F10101000100001000110011010011010 :(A lrot 5) + F + E10000110110001110111110000001001111 :Out 1000011011000111011110000001001111:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K110100010011111101111110010111111110000:Out 110100010011111101111110010111111110000 :(A lrot 5) + F + E + K00111000100110011010101100001010:Word 36 :(A lrot 5) + F + E + K + W ord 361110110000101001000101110110111111010 :temp 110000101001000101110110111111010:truncated temp 010011011001010110010110111011101011:E=D11101000111100010111010011000011:D=C010010111011100111110011111000100:C = B Left Rotate 3011100111001110001011001001100011:B = A110000101001000101110110111111010 :A = TempWord 37 11100111001110001011001001100011 :B 010010111011100111110011111000100:C B XOR C

10101100100000010100000110100111

:Out

10101100100000010100000110100111 :B XOR C 11101000111100010111010011000011 (B XOR C) XOR D 01000100011100000011010101100100:F 011011101101100111101011110100001010100100010111011011111101011000:A lrot 5 01000100011100000011010101100100:(A lrot 5) + F11001011010011111100010100101111100:Out 11001011010011111100010100101111100:(A lrot 5) + F01001101100101011001011011101011:Е :(A lrot 5) + F + E11111001000011010010101011110100111:Out 111111001000011010010101011110100111:(A lrot 5) + F + E01101110110110011110101110100001:K :(A lrot 5) + F + E + K10001010011000011101001011101001000:Out 10001010011000011101001011101001000:(A lrot 5) + F + E + K01101100111010000100110010110100:Word 37 :(A lrot 5) + F + E + K + W ord 37

:temp

101111111111101101110001111111100 :truncated temp 11101000111100010111010011000011 :E = D 01001011101110011111001111000100 :D = C 11111001110011100010110010010000 :C = B Left Rotate 30 110000101001000101110110111111010 :B = A 1011111111111101101110001111111100 :A = Temp	
Word 38	
110000101001000101110110111111010	
:B 11111001110011100010110010011000 :C	
B XOR C 0011101101111110101101001100010 :Out	
00111011010111110101101001100010 :B XOR C 01001011101110011111001111000100 :D	
(B XOR C) XOR D 011100001110011010101010110 :F	
01101110110110011110101110100001	
:K 11111110110111000111111110010111	
:A lrot 5 0111000011100110101010100110 :F	
:(A lrot 5) + F 1011011111110000110010100100111101 :Out	
101101111110000110010100100111101 :(A lrot 5) + F 11101000111100010111010011000011 :E	
:(A lrot 5) + F + E	

10010110001011010010011110000000000 :(A lrot 5) + F + E 01101110110110011110101110100001 :K

:(A lrot 5) + F + E + K 11011000111100011101000100110100001 :Out

11011000111100011101000100110100001 :(A lrot 5) + F + E + K 110110110011011111010011000110011 :Word 38

:(A lrot 5) + F + E + K + Word 38 111110100010110001100010111111010100 :temp

 $\begin{array}{l} 101000101100011000101111111010100 \\ :truncated \ temp \\ 01001011101110011111001111100110100100 \\ :E = D \\ 111110011100111100010110010011001 \\ :D = C \\ 10110000101001001001011101101111110 \\ :C = B \ Left \ Rotate \ 30 \\ 10111111111111111011110001111111100 \\ :B = A \\ 10100010110001100010111111110100 \\ :A = Temp \\ \end{array}$

Word 39

1011111111111011011100011111111100 :B 10110000101001000101110110111110 :C

B XOR C 000011110101001010111111001000010 :Out

000011110101001010111111001000010 :B XOR C 111110011110011100010110010011000 :D (B XOR C) XOR D 11110110100111001001001011011010:F 01101110110110011110101110100001010110001100010111111101010010100:A lrot 5 11110110100111001001001011011010:F :(A lrot 5) + F1010011110110001010001101011011110:Out 101001111011000101000110101101101110:(A lrot 5) + F010010111011100111110011111000100:Е :(A lrot 5) + F + E1110011011000111001000000100110010:Out 1110011011000111001000000100110010:(A lrot 5) + F + E011011101101100111101011110100001:K :(A lrot 5) + F + E + K10000001001111101100110110011010011 :Out 10000001001111101100110110011010011 :(A lrot 5) + F + E + K01010110110100100011000111000110:Word 39

:(A lrot 5) + F + E + K + Word 39 110001100000110010001001111010011001 :temp

 $\begin{array}{l} 01100000110010001001111010011001\\ :truncated\ temp\\ 11111001110011100010110010011000\\ :E=D\\ 1011000010100100101110110111110\\ :D=C \end{array}$

00101111111111101101111000111111111111	
Word 40	
10100010110001100010111111010100 :B 00101111111111	
B AND C 00100010110001000010100011010100 :Out	
10100010110001100010111111010100 :B 10110000101001000101110110111110 :D	
B AND D 10100000100001000000110110010100 :Out	
00101111111111011011100011111111111111	
C AND D 00100000101001000001100010111110 :Out	
00100010110001000010100011010100 :B AND C 10100000100001000000110110010100 :B AND D	
(B AND C) OR (B AND D) 10100010110001000010110111010100 :Out	
10100010110001000010110111010100 :(B AND C) OR (B AND D) 00100000101001000001100010111110	

((B AND C) OR (B AND D)) OR (C AND D) 101000101110010000111101111111110:F 10001111000110111011110011011110000011001000100111101001100101100:A lrot 5 101000101110010000111101111111110:F :(A lrot 5) + F110111011111111100000010001001010101:Out 1101110111111110000001000100101010 :(A lrot 5) + F11111001110011100010110010011000:Е :(A lrot 5) + F + E1010110101110001100011110111000010:Out 10101101011110001100011110111000010:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K111010001001110000111111101010011110 :Out 111010001001110000111111101010011110 :(A lrot 5) + F + E + K0111010011111001111110110010000000:Word 40 :(A lrot 5) + F + E + K + Word 401111101110011101010111110011100011110

 $\begin{array}{l} 10111001110101011110011100011110\\ :truncated\ temp\\ 101100001010010001011101101111110\\ :E=D\\ 00101111111111110110111100011111111\\ :D=C \end{array}$

:temp

00101000101100011000101111110101 :C = B Left Rotate 30 01100000110010001001111010011001 :B = A 10111001110101011110011100011110 :A = Temp	
Word 41	
01100000110010001001111010011001 :B 0010100010110001100	
B AND C 00100000100000001000101010010001 :Out	
01100000110010001001111010011001 :B 00101111111111	
B AND D 00100000110010001001100010011001 :Out	
001010001011000110001011111110101 :C 00101111111111	
C AND D 00101000101100011000100011110101 :Out	
00100000100000001000101010010001 :B AND C 00100000110010001001100010011001 :B AND D	
(B AND C) OR (B AND D) 001000001100100010011010101001 :Out	
00100000110010001001101010011001 :(B AND C) OR (B AND D) 00101000101100011000100011110101	

((B AND C) OR (B AND D)) OR (C AND D) 001010001111100110011010111111101:F 100011110001101110111100110111100001110101011111001110001111010111:A lrot 5 001010001111100110011010111111101:F :(A lrot 5) + F1011000111011011001111111011010100:Out 1011000111011011001111111011010100 :(A lrot 5) + F10110000101001000101110110111110:Е :(A lrot 5) + F + E1000010100010110101101110010010010:Out 1000010100010110101101110010010010:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K11010100011011101101001100101101110:Out 11010100011011101101001100101101110:(A lrot 5) + F + E + K10001100100100110001001111001100 :Word 41

:(A lrot 5) + F + E + K + Word 41 111100110000000010011010110100111010 :temp

 $\begin{array}{l} 00110000000010011010110100111010\\ :truncated\ temp\\ 0010111111111111011011100011111111\\ :E=D\\ 001010001011000110001011111110101\\ :D=C \end{array}$

:C = B Left Rotate 30 101110011101011110011110	
:B = A 00110000000010011010110100111010 :A = Temp	
Word 42	
10111001110101011110011100011110 :B 01011000001100100010011110100110 :C	
B AND C 00011000000100000010011100000110 :Out	
10111001110101011110011100011110 :B 0010100010110001100	
B AND D 00101000100100011000001100010100 :Out	
01011000001100100010011110100110 :C 0010100010110001100	
C AND D 00001000001100000000001110100100 :Out	
00011000000100000010011100000110 :B AND C 00101000100100011000001100010100 :B AND D	
(B AND C) OR (B AND D) 00111000100100011010011100010110 :Out	
00111000100100011010011100010110 :(B AND C) OR (B AND D) 00001000001100000000001110100100	

((B AND C) OR (B AND D)) OR (C AND D) 00111000101100011010011110110110:F 10001111000110111011110011011110000000001001101011010011101000110:A lrot 5 00111000101100011010011110110110:F :(A lrot 5) + F1001110011110011101001110111111100:Out 1001110011110011101001110111111100:(A lrot 5) + F001011111111111101101111000111111111:Е :(A lrot 5) + F + E1101101001111100101000001111111111011:Out 11011010011110010100000111111111011:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K111111111001000000001100010011010111 :Out 11111111001000000001100010011010111 :(A lrot 5) + F + E + K101110010010111101000110000110001 :Word 42 :(A lrot 5) + F + E + K + Word 42100010110010001011110101000100001000

 $\begin{array}{l} 101100100010111110101000100001000\\ :truncated\ temp\\ 001010001011000110001011111110101\\ :E=D\\ 01011000001100100010011110100110\\ :D=C \end{array}$

:temp

:C = B Left Rotate 30	
0011000000010011010110100111010 :B = A	
:A = Temp	
Word 43	
0011000000010011010110100111010	
:B 10101110011101010111100111000111 :C	
B AND C 00100000000000010010100100000010 :Out	
0011000000010011010110100111010	
:B 01011000001100100010011110100110 :D	
B AND D 00010000000000000010010100100010 :Out	
10101110011101010111100111000111 :C	
01011000001100100010011110100110 :D	
C AND D 00001000001100000010000110000110 :Out	
0010000000000010010100100000010	
:B AND C 0001000000000000001001010010010 :B AND D	
(B AND C) OR (B AND D) 00110000000000010010110100100010 :Out	
0011000000000010010110100100010 :(B AND C) OR (B AND D) 00001000001100000010000110000110	

((B AND C) OR (B AND D)) OR (C AND D) 00111000001100010010110110100110:F 10001111000110111011110011011110001000101111010100010000100010110:A lrot 5 00111000001100010010110110100110:F :(A lrot 5) + F10111111100001101101001110101111100:Out 10111111100001101101001110101111100:(A lrot 5) + F001010001011000110001011111110101:Е :(A lrot 5) + F + E111010011011001100110110101010110001:Out 1110100110110011001101101010110001:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K1000011010111110100010010111110001101:Out 1000011010111110100010010111110001101 :(A lrot 5) + F + E + K10110011101000010011110000110001 :Word 43

 $\begin{array}{l} 11101001100010011101001110111110 \\ :truncated\ temp \\ 01011000001100100010011110100110 \\ :E=D \\ 10101110011101010111100111000111 \\ :D=C \end{array}$

:(A lrot 5) + F + E + K + Word 43

:temp

1100111010011000100111010011101111110

10001100000000100110101101001110 :C = B Left Rotate 30 101100100010111110101000100001000 :B = A 11101001100010011101001110111110 :A = Temp	
Word 44	
10110010001011110101000100001000 :B 10001100000000100110101101	
B AND C 10000000000000100100000100001000 :Out	
10110010001011110101000100001000 :B 1010111001110	
B AND D 10100010001001010101000100000000 :Out	
10001100000000100110101101001110 :C 1010111001110	
C AND D 10001100000000000110100101000110 :Out	
10000000000000100100000100001000 :B AND C 10100010001001010101000100000000 :B AND D	
(B AND C) OR (B AND D) 10100010001001110101000100001000 :Out	
10100010001001110101000100001000 :(B AND C) OR (B AND D) 10001100000000000110100101000110	

((B AND C) OR (B AND D)) OR (C AND D) 101011100010011101111100101001110:F 100011110001101110111100110111100001100010011101001110111111011101:A lrot 5 101011100010011101111100101001110:F :(A lrot 5) + F1110111110110000111111000100101011:Out 1110111110110000111111000100101011:(A lrot 5) + F01011000001100100010011110100110:Е :(A lrot 5) + F + E1000110111100101000001100011010001 :Out 1000110111100101000001100011010001:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K1101100011010101111111010101101101 :Out 1101100011010101111111010101101101 :(A lrot 5) + F + E + K10000111011011000011100101010001:Word 44

:(A lrot 5) + F + E + K + Word 44 111101001110000111000000111011111110 :temp

 $\begin{array}{l} 010011100001110000001110111111110 \\ :truncated\ temp \\ 101011100111101011111001111000111 \\ :E=D \\ 10001100000000100110101101001110 \\ :D=C \end{array}$

0010110010001011111010001000010 :C = B Left Rotate 30 111010011000100111010011101111110 :B = A 01001110000111000000111011111110 :A = Temp	
Word 45	
111010011000100111010011101111110 :B 001011001000101111101010001000010	
B AND C 001010001000100111010000000000010 :Out	
111010011000100111010011101111110 :B 10001100000000100110101101	
B AND D 100010000000000000100001100001110 :Out	
00101100100010111101010001000010 :C 10001100000000100110101101	
C AND D 000011000000010010000001000010 :Out	
001010001000100111010000000000010 :B AND C 100010000000000000100001100001110 :B AND D	
(B AND C) OR (B AND D) 10101000100010011101001100001110 :Out	
10101000100010011101001100001110 :(B AND C) OR (B AND D) 00001100000000100100000001000010	

((B AND C) OR (B AND D)) OR (C AND D) 101011001000101111101001101001110:F 100011110001101110111100110111100110000111000000111011111111001001:A lrot 5 101011001000101111101001101001110:F :(A lrot 5) + F101110000000011011011001100010111:Out 101110000000011011011001100010111 :(A lrot 5) + F101011100111010101111100111000111:Е :(A lrot 5) + F + E1000011110100000110010110011011110:Out 1000011110100000110010110011011110:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K11010101101100111101110100110111010 :Out 1101010110110011111011101001101111010 :(A lrot 5) + F + E + K11000110101100011000010111101000

:(A lrot 5) + F + E + K + Word 45 111101110100010100000110111110100010 :temp

:Word 45

 $\begin{array}{l} 011101000101000001101111110100010\\ :truncated\ temp\\ 10001100000000100110101101001110\\ :E=D\\ 00101100100010111101000100010\\ :D=C \end{array}$

10111010011000100111010011101111 :C = B Left Rotate 30 01001110000111000000111011111110 :B = A 01110100010100000110111110100010 :A = Temp	
Word 46	
01001110000111000000111011111110 :B	
:B 10111010011000100111010011101111 :C	
B AND C 00001010000000000000010011101110 :Out	
01001110000111000000111011111110	
:B 00101100100010111101010001000010 :D	
B AND D 000011000000100000001000100010 :Out	
10111010011000100111010011101111	
:C 00101100100010111101010001000010 :D	
C AND D 0010100000000100101010001000010 :Out	
0000101000000000000010011101110	
:B AND C 000011000000100000001000100010 :B AND D	
(B AND C) OR (B AND D) 0000111000001000000010011101110 :Out	
0000111000001000000010011101110	

:(B AND C) OR (B AND D)

:C AND D

00101000000000100101010001000010

((B AND C) OR (B AND D)) OR (C AND D) 001011110000010100101010011101110:F 100011110001101110111100110111100100010100000110111111010001001110:A lrot 5 00101110000010100101010011101110:F :(A lrot 5) + F110111000000110000100100100111100:Out 110111000000110000100100100111100:(A lrot 5) + F10001100000000100110101101001110:Е :(A lrot 5) + F + E1001000100000110101011010010001010:Out 1001000100000110101011010010001010:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K11011010011001101100111000101100110 :Out 11011010011001101100111000101100110 :(A lrot 5) + F + E + K10111101100001000001000011001101

:Word 46

:(A lrot 5) + F + E + K + Word 46111110010000101110101000001000110011:temp

10010000101110101000001000110011 :truncated temp 0010110010001011110101000100001010111010011000100111010011101111:D = C

:C = B Left Rotate 30 011101000101000001101111110100010 :B = A	
10010000101110101000001000110011 :A = Temp	
Word 47	
01110100010100000110111110100010 :B 10010011100001110000001110111111 :C	
B AND C 0001000000000000000001110100010 :Out	
01110100010100000110111110100010 :B 10111010011000100111010011101111 :D	
B AND D 00110000010000000110010010100010 :Out	
10010011100001110000001110111111 :C 10111010011000100111010011101111 :D	
C AND D 1001001000000010000000010101111 :Out	
0001000000000000000001110100010 :B AND C 00110000010000000110010010100010 :B AND D	
(B AND C) OR (B AND D) 00110000010000000110011110100010 :Out	
00110000010000000110011110100010 :(B AND C) OR (B AND D) 1001001000000010000000010101111	

((B AND C) OR (B AND D)) OR (C AND D) 10110010010000100110011110101111:F 10001111000110111011110011011110000010111010100000100011001110010:A lrot 5 10110010010000100110011110101111:F :(A lrot 5) + F1110010011001001010101111000100001:Out 1110010011001001010101111000100001:(A lrot 5) + F00101100100010111101010001000010:Е :(A lrot 5) + F + E11111101100001111101000001001100011 :Out 11111101100001111101000001001100011:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K100100001010011101000111111100111111:Out 100100001010011101000111111100111111 :(A lrot 5) + F + E + K11101000101100110010011010110000:Word 47 :(A lrot 5) + F + E + K + Word 47

 $\begin{array}{l} 011011011111011010110010111101111 \\ :truncated\ temp \\ 10111010011000100111010011101111 \\ :E=D \\ 10010011100001110000001110111111 \\ :D=C \end{array}$

:temp

11010110110111110110101100101111101111

10011101000101000001101111101000 :C = B Left Rotate 30 10010000101110101000001000110011 :B = A 01101101111011010110010111101111 :A = Temp	
Word 48	
10010000101110101000001000110011 :B 100111010001010000011011111101000 :C	
B AND C 100100000010000000001000100000 :Out	
10010000101110101000001000110011 :B 10010011100001110000001110111111 :D	
B AND D 1001000010000010000001000110011 :Out	
10011101000101000001101111101000 :C 10010011100001110000001110111111 :D	
C AND D 10010001000001000000001110101000 :Out	
1001000000100000000001000100000 :B AND C 1001000010000010000001000110011 :B AND D	
(B AND C) OR (B AND D) 1001000010010010000000110011 :Out	
1001000010010010000000110011 :(B AND C) OR (B AND D) 10010001000001000000001110101000	

((B AND C) OR (B AND D)) OR (C AND D) 10010001100101100000001110111011:F 100011110001101110111100110111100101111011010110010111110111101101 :A lrot 5 10010001100101100000001110111011:F :(A lrot 5) + F101001111010000101100000110101000:Out 101001111010000101100000110101000:(A lrot 5) + F10111010011000100111010011101111:Е :(A lrot 5) + F + E1000001001101001010011011010010111:Out 1000001001101001010011011010010111:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K11010011000110000001111001101110011 :Out 11010011000110000001111001101110011 :(A lrot 5) + F + E + K01011110011110100100000101110101:Word 48 :(A lrot 5) + F + E + K + Word 48

 $\begin{array}{l} 11110111001110110011010011101000 \\ :truncated\ temp \\ 10010011100001110000001110111111 \\ :E=D \\ 100111010001010000011011111101000 \\ :D=C \end{array}$

111011110111001110110011010011101000

:temp

11100100001011101010000010001100 :C = B Left Rotate 30 01101101111011010110010111101111 :B = A 11110111001110110011010011101000 :A = Temp	
Word 49	
01101101111011010110010111101111 :B 111001000010111101010000010001100 :C	
B AND C 0110010000101100001000010001100 :Out	
01101101111011010110010111101111 :B 100111010001010000011011111101000 :D	
B AND D 0000110100000100000000111101000 :Out	
11100100001011101010000010001100 :C 100111010001010000011011111101000 :D	
C AND D 1000010000000100000000010001000 :Out	
01100100001011000010000010001100 :B AND C 00001101000001000000000111101000 :B AND D	
(B AND C) OR (B AND D) 01101101001011000010000111101100 :Out	
01101101001011000010000111101100 :(B AND C) OR (B AND D) 10000100000001000000000010001000	

((B AND C) OR (B AND D)) OR (C AND D) 11101101001011000010000111101100:F 10001111000110111011110011011110011100111011001101001110100011110:A lrot 5 11101101001011000010000111101100:F :(A lrot 5) + F1110101001001001010111111100001010:Out 1110101001001001010111111100001010:(A lrot 5) + F10010011100001110000001110111111:Е :(A lrot 5) + F + E1001101000000110011100001011001001 :Out 1001101000000110011100001011001001:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K1101111011100110101011111111110100101 :Out 1101111011100110101011111111110100101 :(A lrot 5) + F + E + K

00011110100110111101011101001111:Word 49

:(A lrot 5) + F + E + K + Word 4911110001010111101000101010110111110100:temp

0001010111101000101010110111110100:truncated temp 1001110100010100000110111110100011100100001011101010000010001100:D = C

11011011011110110101100101111011 :C = B Left Rotate 30 11110111001110110011010011101000 :B = A 00010101111010001010110111110100 :A = Temp	
Word 50	
11110111001110110011010011101000 :B 1101101101111011	
B AND C 11010011001110110001000001101000 :Out	
11110111001110110011010011101000 :B 11100100001011101010000010001100 :D	
B AND D 1110010000101010001000010001000 :Out	
11011011011110110101100101111011 :C 11100100001011101010000010001100 :D	
C AND D 110000000101010000000000000000000000	
11010011001110110001000001101000 :B AND C 11100100001010100001000010000 :B AND D	
(B AND C) OR (B AND D) 11110111001110110011000011101000 :Out	

11110111001110110011000011101000

110000000010101000000000000001000

:(B AND C) OR (B AND D)

((B AND C) OR (B AND D)) OR (C AND D) 11110111001110110011000011101000:F 100011110001101110111100110111100101110100010101011011111010000010:A lrot 5 11110111001110110011000011101000:F :(A lrot 5) + F110110001011001100000111101101010:Out 110110001011001100000111101101010:(A lrot 5) + F10011101000101000001101111101000:Е :(A lrot 5) + F + E1001001110011110100010101101010010:Out 10010011100111101000101011010101010:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K110110111011001010111110100000101110 :Out 110110111011001010111110100000101110

110110111011001010111110100000101110
:(A lrot 5) + F + E + K
1011001101111101001100101111111101
:Word 50

:(A lrot 5) + F + E + K + Word 50 111110010001000100010011100010111 :temp

 $\begin{array}{l} 10010001000100000100111000101011 \\ \hbox{:truncated temp} \\ 111001000010111101010000010001100 \\ \hbox{:}E = D \\ 1101101101111101101101100101111011 \\ \hbox{:}D = C \end{array}$

00111101110011101100110100111010 :C = B Left Rotate 30 0001010111101000101010110111110100 :B = A 10010001000100000100111000101011 :A = Temp	
Word 51	
000101011101000101010110111110100 :B 00111110111001110	
B AND C 000101011110000000100010000110000 :Out	
000101011101000101010110111110100	
:B 11011011011110110101100101111011 :D	
B AND D 000100010101000001110000 :Out	
00111101110011101100110100111010	
:C 11011011011110110101100101111011 :D	
C AND D 00011001010010100100100100111010 :Out	
000101011110000000100010000110000	
:B AND C 00010001010100010101000001110000 :B AND D	
(B AND C) OR (B AND D) 000101011110100010101010001110000 :Out	
00010101110100010101010001110000 :(B AND C) OR (B AND D) 000110010100100100100100111010	

((B AND C) OR (B AND D)) OR (C AND D) 000111011101101101011110101111010:F 100011110001101110111100110111100001000100000100111000101011110010:A lrot 5 000111011101101101011110101111010:F :(A lrot 5) + F1001111111111001010010001011101100:Out 10011111111110010100100010111101100 :(A lrot 5) + F11100100001011101010000010001100:Е :(A lrot 5) + F + E100010010000010011111000011011111000:Out 100010010000010011111000011011111000:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K110101100110010111111000000001010100 :Out 110101100110010111111000000001010100 :(A lrot 5) + F + E + K

000000110110100010100010101010101:Word 51

:(A lrot 5) + F + E + K + Word 511110101101101001100000100010111111101:temp

101101101001100000100010111111101 :truncated temp 11011011011110110101100101111011 00111101110011101100110100111010:D=C

0000010101111010001010101101111101 :C = B Left Rotate 30 10010001000100000100111000101011 :B = A 10110110100110000010001011111101 :A = Temp	
Word 52	
10010001000100000100111000101011 :B 0000010101111010001010101101111101 :C	
B AND C 000000010001000010001000101001 :Out	
10010001000100000100111000101011 :B 00111110111001110	
B AND D 00010001000000000100110000101010 :Out	
00000101011101000101010110111101 :C 0011110111001110	
C AND D 00000101010001000100010100111000 :Out	
00000001000100000100010000101001 :B AND C 00010001000000000100110000101010 :B AND D	
(B AND C) OR (B AND D) 00010001000100000100110000101011 :Out	
00010001000100000100110000101011 :(B AND C) OR (B AND D) 00000101010001000100010100111000	

((B AND C) OR (B AND D)) OR (C AND D) 00010101010101000100110100111011:F 100011110001101110111100110111100110100110000010001011111110110110:A lrot 5 0001010101010101000100110100111011:F :(A lrot 5) + F111101000010110001010110011110001:Out 111101000010110001010110011110001:(A lrot 5) + F11011011011110110101100101111011 :Е :(A lrot 5) + F + E1011000011110101000000011001101100 :Out 1011000011110101000000011001101100:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K111010100101110111111100001101001000 :Out 1110101001011110111111100001101001000 :(A lrot 5) + F + E + K111101001011001111100011001001110

:Word 52

:(A lrot 5) + F + E + K + Word 52100001000111101000111000100110010110:temp

01000111101000111000100110010110:truncated temp 001111011100111011001101001110100000010101111010001010101101111101:D = C

:C = B Left Rotate 30 1011011010011000001001111111101	
:B = A 01000111101000111000100110010110 :A = Temp	
Word 53	
10110110100110000010001011111101 :B	
1110010001000100001001110001010 :C	
B AND C 1010010000000000000001010001000 :Out	
10110110100110000010001011111101	
:B 000001010111010001010101111101 :D	
B AND D 000001000001000000000010111101 :Out	
1110010001000100001001110001010 :C	
.C 00000101011101000101010110111101 :D	
C AND D 00000100010001000110001000 :Out	
10100100000000000000001010001000	
:B AND C 0000010000010000000000010111101 :B AND D	
(B AND C) OR (B AND D) 1010010000010000000001010111101 :Out	
10100100000100000000001010111101 :(B AND C) OR (B AND D) 0000010001000100001000110001000	

((B AND C) OR (B AND D)) OR (C AND D) 10100100010101000001001110111101:F 10001111000110111011110011011110011110100011100010011001011001000:A lrot 5 10100100010101000001001110111101:F :(A lrot 5) + F110011000110001010100011010000101:Out 110011000110001010100011010000101:(A lrot 5) + F00111101110011101100110100111010:Е :(A lrot 5) + F + E1111010110100101000001001110111111:Out 1111010110100101000001001110111111:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K100011001011010111111101000010011011:Out 100011001011010111111101000010011011 :(A lrot 5) + F + E + K100111111111000110011101011001110:Word 53

:(A lrot 5) + F + E + K + Word 53 110100000101100100110000101101101001 :temp

 $\begin{array}{l} 00000101100100110000101101101001\\ :truncated\ temp\\ 0000010101111010001010101101111101\\ :E=D\\ 1110010001000100010001001110001010\\ :D=C \end{array}$

01101101101001100000100010111111 :C = B Left Rotate 30 01000111101000111000100110010110 :B = A 00000101100100110000101101101001 :A = Temp	
Word 54	
01000111101000111000100110010110 :B 01101101101001100000100010111111 :C	
B AND C 01000101101000100000100010010110 :Out	
01000111101000111000100110010110 :B 11100100010001000010	
B AND D 01000100000000000000000110000010 :Out	
01101101101001100000100010111111 :C 11100100010001000001001110001010 :D	
C AND D 01100100000001000000000010001010 :Out	
01000101101000100000100010010110 :B AND C 01000100000000000000000110000010 :B AND D	
(B AND C) OR (B AND D) 01000101101000100000100110010110 :Out	
01000101101000100000100110010110 :(B AND C) OR (B AND D) 0110010000000100000000010001010	

((B AND C) OR (B AND D)) OR (C AND D) 01100101101001100000100110011110:F 10001111000110111011110011011110010110010011000010110110100100000:A lrot 5 01100101101001100000100110011110:F :(A lrot 5) + F100011000000001110111011010111110:Out 100011000000001110111011010111110:(A lrot 5) + F0000010101111010001010101101111101:Е :(A lrot 5) + F + E1100011101011110111100110001111011:Out 11000111010111101111100110001111011:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K111101011001001011111000100101010111 :Out 111101011001001011111000100101010111 :(A lrot 5) + F + E + K0010001001010001111110001101011110:Word 54

:(A lrot 5) + F + E + K + Word 54 111111001110111010010111101100000101 :temp

 $\begin{array}{l} 11001110111010010111101100000101\\ :truncated\ temp\\ 111001000100010000001001110001010\\ :E=D\\ 0110110110110100110000010010111111\\ :D=C \end{array}$

10010001111010001110001001100101 :C = B Left Rotate 30 00000101100100110000101101101001 :B = A 11001110111010010111101100000101 :A = Temp	
Word 55	
00000101100100110000101101101001 :B 10010001111010001110001001100101 :C	
B AND C 000000011000000000001001100001 :Out	
00000101100100110000101101101001 :B 01101101101001100000100010111111 :D	
B AND D 0000010100000100000101001 :Out	
10010001111010001110001001001 :C 01101101101001100000100010111111 :D	
C AND D 0000000110100000000000000100101 :Out	
000000011000000000001001100001 :B AND C 00000101100000100000101001 :B AND D	
(B AND C) OR (B AND D) 00000101100000101001101001 :Out	

00000101100000100000101001101001 :(B AND C) OR (B AND D) 0000000110100000000000000100101

((B AND C) OR (B AND D)) OR (C AND D) 00000101101000100000101001101101:F 1000111100011011101111001101111001101110100101111101100000101111001 :A lrot 5 00000101101000100000101001101101:F :(A lrot 5) + F111100010110100010110101100100110:Out 111100010110100010110101100100110 :(A lrot 5) + F11100100010001000001001110001010:Е :(A lrot 5) + F + E10110001110001010101111111010110000:Out 10110001110001010101111111010110000:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K11101010110001100010011101110001100 :Out 11101010110001100010011101110001100 :(A lrot 5) + F + E + K10001100100000111000010111101001:Word 55

:(A lrot 5) + F + E + K + Word 55 11111111000101101101001100000101110101 :temp

 $\begin{array}{l} 11100010101101001100000101110101 \\ :truncated\ temp \\ 01101101101001100000100010111111 \\ :E=D \\ 10010001111010001110001001001100101 \\ :D=C \end{array}$

01000001011001001100001011011010 :C = B Left Rotate 30 110011101110110101111101100000101 :B = A 11100010101101001100000101110101 :A = Temp	
Word 56	
11001110111010010111101100000101 :B 01000001011001001100001011011010 :C	
B AND C 0100000011000000100001000000000000000	
11001110111010010111101100000101 :B 10010001111010001110001001100101 :D	
B AND D 10000000111010000110001000000101 :Out	
01000001011001001100001011011010 :C 10010001111010001110001001100101 :D	
C AND D 0000001011000001100001001000000 :Out	
01000000110000001000010000000000000000	
(B AND C) OR (B AND D) 11000000111010000110001000000101 :Out	
11000000111010000110001000000101 :(B AND C) OR (B AND D) 00000001011000001100001001000000	

((B AND C) OR (B AND D)) OR (C AND D) 1100000111101000111000100100101:F 10001111000110111011110011011110001010110100110000010111010111100:A lrot 5 1100000111101000111000100100101:F :(A lrot 5) + F100011000100000010001000100000001:Out 100011000100000010001000100000001:(A lrot 5) + F01101101101001100000100010111111:Е :(A lrot 5) + F + E1110000110001001110001100111000000:Out 1110000110001001110001100111000000:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K10000010101010000101101011010011100 :Out 10000010101010000101101011010011100:(A lrot 5) + F + E + K00011000100010000011011000010100

:Word 56 :(A lrot 5) + F + E + K + Word 56

:(A lrot 5) + F + E + K + Word 56 110000101101110010110000110010110000 :temp

 $\begin{array}{l} 00101101110010110000110010110000 \\ :truncated\ temp \\ 10010001111010001110001001100101 \\ :E=D \\ 01000001011001001100001011011010 \\ :D=C \end{array}$

:C = B Left Rotate 30 111000101011010011100000101110101 :B = A 00101101110010110000110010110000 :A = Temp	
Word 57	
11100010101101001100000101110101 :B 0111001110	
B AND C 0110001010110000010000001000001 :Out	
11100010101101001100000101110101 :B 01000001011001001100001011011010 :D	
B AND D 0100000001001001100000001010000 :Out	
01110011101110100101111011000001 :C 01000001011001001100001011011010 :D	
C AND D 01000001001000000100001011000000 :Out	
01100010101100000100000001000001 :B AND C 01000000001001001100000001010000 :B AND D	
(B AND C) OR (B AND D) 01100010101101001100000001010001 :Out	
01100010101101001100000001010001 :(B AND C) OR (B AND D) 01000001001000000100001011000000	

:C AND D

((B AND C) OR (B AND D)) OR (C AND D) 01100011101101001100001011010001:F 10001111000110111011110011011110010111001011000011001011000000101:A lrot 5 01100011101101001100001011010001:F :(A lrot 5) + F100011101000101100101100011010110:Out 100011101000101100101100011010110 :(A lrot 5) + F10010001111010001110001001100101:Е :(A lrot 5) + F + E1110101110111111111100111101100111011 :Out 1110101110111111111100111101100111011 :(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K100001111100001101011111100000010111 :Out 100001111100001101011111100000010111 :(A lrot 5) + F + E + K000001111111100000001001000111000:Word 57

:(A lrot 5) + F + E + K + Word 57 110001000110000010110000101001001111 :temp

 $\begin{array}{l} 01000110000010110000101001001111 \\ \hbox{:truncated temp} \\ 01000001011001001100001011011010 \\ \hbox{:}E = D \\ 01110011101110110100101111011000001 \\ \hbox{:}D = C \end{array}$

01111000101011010011000001011101 :C = B Left Rotate 30 00101101110010110000110010110000 :B = A 01000110000010110000101001001111 :A = Temp	
Word 58	
00101101110010110000110010110000 :B 011111000101011010011000001011101 :C	
B AND C 00101000100010010000000000010000 :Out	
00101101110010110000110010110000 :B 0111001110	
B AND D 00100001100010100000110010000000 :Out	
01111000101011010011000001011101 :C 0111001110	
C AND D 01110000101010000001000001000001 :Out	
001010001000100100000000000010000 :B AND C 00100001100010100000110010000000 :B AND D	
(B AND C) OR (B AND D) 00101001100010110000110010010000 :Out	
00101001100010110000110010010000 :(B AND C) OR (B AND D) 01110000101010000001000001000001	

:C AND D

((B AND C) OR (B AND D)) OR (C AND D) 01111001101010110001110011010001:F 10001111000110111011110011011110011000001011000010100100111101000:A lrot 5 01111001101010110001110011010001:F :(A lrot 5) + F1001110110000110001100110101111001:Out 100111011000011000110011010111001 :(A lrot 5) + F01000001011001001100001011011010:Е :(A lrot 5) + F + E11011111100011100010010100110010011:Out 110111111000111100010010100110010011:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K10000001011100011001110011001101111 :Out 10000001011100011001110011001101111 :(A lrot 5) + F + E + K000000110111011010101010111101000:Word 58

:(A lrot 5) + F + E + K + Word 58 11000000111100000011100100010101111 :temp

 $\begin{array}{l} 00001111000000111001000101010111\\ :truncated\ temp\\ 0111001110111011001011111011000001\\ :E=D\\ 01111000101011010011000001011101\\ :D=C \end{array}$

00001011011100101100001100101100 :C = B Left Rotate 30 01000110000010110000101001001111 :B = A 0000111100000011100100010101111 :A = Temp	
Word 59	
01000110000010110000101001001111 :B 00001011011100101100001100101100 :C	
B AND C 000000100000010000001100 :Out	
01000110000010110000101001001111 :B 01111000101011010011000001011101 :D	
B AND D 010000000001001000000001001101 :Out	
00001011011100101100001100101100 :C 01111000101011010011000001011101 :D	
C AND D 00001000001000000000000000001100 :Out	
000000100000010000001100 :B AND C 010000000001001000000001001101 :B AND D	
(B AND C) OR (B AND D) 01000010000010110000001001001101 :Out	
01000010000010110000001001001101	

:(B AND C) OR (B AND D)

:C AND D

000010000010000000000000000001100

((B AND C) OR (B AND D)) OR (C AND D) 01001010001010110000001001001101:F 100011110001101110111100110111100111000000111001000101010111100001:A lrot 5 010010100010101110000001001001101:F :(A lrot 5) + F100101010100111010010110100101110:Out 100101010100111010010110100101110:(A lrot 5) + F011100111011101001011111011000001:Е :(A lrot 5) + F + E11100111100101010111110001011111101111:Out 111001111001010111110001011111101111:(A lrot 5) + F + E100011110001101110111100110111100:K :(A lrot 5) + F + E + K100001011010111100110100100011001011 :Out 100001011010111100110100100011001011 :(A lrot 5) + F + E + K11011101111000000101101011001000 :Word 59

 $\begin{array}{l} 00001011010100111010001110010011 \\ :truncated\ temp \\ 01111000101011010011000001011101 \\ :E=D \\ 00001011011100101100001100101100 \\ :D=C \end{array}$

:(A lrot 5) + F + E + K + Word 59

:temp

110100001011010100111010001110010011

11010001100000101100001010011 :C = B Left Rotate 30 000011110000001110010001010111 :B = A 0000101101010111010001110010011 :A = Temp	
Word 60	
0000111100000011100100010101111 :B 11010001100000101100001010010011 :C	
B XOR C 11011110100000010101001111000100 :Out	
11011110100000010101001111000100 :B XOR C 00001011011100101100001100101100 :D	
(B XOR C) XOR D 11010101111100111001000011101000 :F	
11001010011000101100000111010110 :K 01101010011101000111001001100001 :A lrot 5 110101011111100111001000011101000 :F	
:(A lrot 5) + F 101000000011010000000001101001001 :Out	
101000000011010000000001101001001 :(A lrot 5) + F 01111000101011010011000001011101 :E	
:(A lrot 5) + F + E 111011100100010101011001110100110 :Out	

1110111001000101010011001110100110

:(A lrot 5) + F + E

11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 1001000001101110111111110101011111100 :Out	
1001000001101110111111110101011111100 :(A lrot 5) + F + E + K 10010011010111111111101111010101 :Word 60	
:(A lrot 5) + F + E + K + Word 60 1101000101101100111111111000101010001 :temp	
0001011011001111111110001010001 :truncated temp 00001011011100101100001100101100 :E = D 1101000110000010110000101001011 :D = C 11000011110000001110010001010101 :C = B Left Rotate 30 000010110101010111010001110010011 :B = A 00010110110011111111110001010001 :A = Temp	
Word 61	
00001011010100111010001110010011 :B	
11000011110000001110010001010101 :C	
B XOR C 11001000100110100011111000110 :Out	
11001000100100110100011111000110 :B XOR C	
:D XOR C 11010001100000101100001010010011 :D	
(B XOR C) XOR D 000110010001000110000101010101 :F	

11001010011000101100000111010110 :K 110110011111111100010101000100010 :A lrot 5 00011001000100011000010101010101:F :(A lrot 5) + F11111100110000111111010111101110111:Out 11111100110000111111010111101110111:(A lrot 5) + F00001011011100101100001100101100:E :(A lrot 5) + F + E11111111111010000010011100101010100011:Out 11111111111010000010011100101010100011:(A lrot 5) + F + E11001010011000101100000111010110 :K :(A lrot 5) + F + E + K10011001000111001010011010001111001 :Out 10011001000111001010011010001111001:(A lrot 5) + F + E + K011001010010111001100110111111101:Word 61 :(A lrot 5) + F + E + K + Word 61110100101110000100111001101101110110:temp 00101110000100111001101101110110:truncated temp

ctruncated temp
11010001100001011100110110110110
:E = D
1100001111000000111001001010101
:D = C
1100001011010101110100011100100
:C = B Left Rotate 30
000101101100111111111100010101001
:B = A
0010111000010011100110110110110
:A = Temp

Word 62	
000101101100111111111000101010001 :B	
11000010110101001110100011100100 :C	
B XOR C 1101010000011011000110110101 :Out	
11010100000110110001100110110101 :B XOR C 11000011110000001110010001010101 :D	
(B XOR C) XOR D 0001011111011011111111100000 :F	
11001010011000101100000111010110	
:K 11000010011100110110111011000101 :A lrot 5	
00010111110110111111110111100000 :F	
:(A lrot 5) + F 111011010010011110110110010100101 :Out	
111011010010011110110110010100101	
:(A lrot 5) + F 11010001100000101100001010010011 :E	
:(A lrot 5) + F + E 10101010111110100100010111100111000 :Out	
1010101011110100100010111100111000 :(A lrot 5) + F + E 11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 11101110110001101001111000100001110 :Out	

11101110110001101001111000100001110 :(A lrot 5) + F + E + K 0011100010011111111110101101111100 :Word 62

:(A lrot 5) + F + E + K + Word 62 11111010111011010101110011011011001010 :temp

 $\begin{array}{l} 10101110110101001110011011001010 \\ : truncated \ temp \\ 11000011110000001110010001010101 \\ : E = D \\ 11000010110101001110100011100100 \\ : D = C \\ 0100010110110011111111110001010100 \\ : C = B \ Left \ Rotate \ 30 \\ 0010111000010011100110110110110110 \\ : B = A \\ 101011101101010011100110110110110 \\ : A = Temp \\ \end{array}$

Word 63

00101110000100111001101101110110 :B 010001011011001111111110001010100 :C

B XOR C 01101011101000000110011100100010 :Out

01101011101000000110011100100010 :B XOR C 11000010110101001110100011100100 :D

(B XOR C) XOR D 10101001011101001000111111000110 :F

:(A lrot 5) + F110000100000100010110100100011011:Out 110000100000100010110100100011011:(A lrot 5) + F11000011110000001110010001010101:E :(A lrot 5) + F + E100100011111101001001001101011110000:Out 10010001111101001001001101011110000 :(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K11100010010001101010000111101000110:Out 11100010010001101010000111101000110:(A lrot 5) + F + E + K1101001111111100100011111110000111:Word 63 :(A lrot 5) + F + E + K + Word 63111111100110001011100010111011001101 :temp 11100110001011100010111011001101 :truncated temp 11000010110101001110100011100100:E = D0100010110110011111111110001010100:D = C10001011100001001110011011011101:C = B Left Rotate 3010101110110101001110011011001010:B = A11100110001011100010111011001101:A = Temp

Word 64

10001011100001001110011011011 :C	
B XOR C 00100101010100000000000000010111 :Out	
0010010101010000000000000000010111 :B XOR C 010001011011001111111110001010100 :D	
(B XOR C) XOR D 011000001110001111111110001000011 :F	
11001010011000101100000111010110	
:K 11000101110001011101100110111100	
:A lrot 5 011000001110001111111110001000011 :F	
:(A lrot 5) + F 1001001101010101111111111111111111111	
10010011010101011101010111111111111111	
:(A lrot 5) + F + E 111110100101111110101111100011 :Out	
111110100101111110101111100011 :(A lrot 5) + F + E 11001010001011000101100000111010110 :K	
:(A lrot 5) + F + E + K 10010110011111000011000000010111001 :Out	
10010110011111000011000000010111001 :(A lrot 5) + F + E + K	

00100001010011001110100011000011

:Word 64

:(A lrot 5) + F + E + K + Word 6411001101010100101111001101001011111100:temp 1101010100101111001101001011111100:truncated temp 010001011011001111111110001010100:E=D10001011100001001110011011011101:D = C10101011101101010011100110110010:C = B Left Rotate 3011100110001011100010111011001101:B = A110101010010111001101001011111100:A = TempWord 65 1110011000101111000101111011001101 10101011101101010011100110110010 B XOR C 010011011001101100010111011111111:Out 010011011001101100010111011111111:B XOR C 10001011100001001110011011011101:D (B XOR C) XOR D 1100011000011111111111000110100010:F 11001010011000101100000111010110 101001011100110100101111110011010:A lrot 5 1100011000011111111111000110100010:F

:(A lrot 5) + F

:Out

10110101111110110100100001001111100

10110101111110110100100001001111100 :(A lrot 5) + F0100010110110011111111110001010100:(A lrot 5) + F + E1110110001101000010001110110010000:Out 1110110001101000010001110110010000:(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K1000111111000000001111011111101100110:Out 10001111100000000111101111101100110 :(A lrot 5) + F + E + K01000101001110010010010011000100:Word 65 :(A lrot 5) + F + E + K + Word 65110011000001001111010000010000101010:temp 11000001001111010000010000101010:truncated temp 10001011100001001110011011011101:E=D10101011101101010011100110110010:D=C01111001100010111000101110110011:C = B Left Rotate 301101010100101111001101001011111100 :B = A11000001001111010000010000101010:A = TempWord 66 1101010100101111001101001011111100 01111001100010111000101110110011:C B XOR C

101011001010010111110001011001111

:Out

10101100101001011110001011001111 :B XOR C 101010111011010011100110110010 :D	
(B XOR C) XOR D 000001110001000011011011111101 :F	
11001010011000101100000111010110 :K	
00100111101000001000010101101000 :A lrot 5	
00000111000100001101101101111101 :F	
:(A lrot 5) + F 100101110101100010110000011010101 :Out	
100101110101100010110000011010101 :(A lrot 5) + F 10001011100001001110011011011101 :E	
:(A lrot 5) + F + E 1110111010001101100100011110110010 :Out	
1110111010001101100100011110110010 :(A lrot 5) + F + E 11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 10010000100100110010000100110001000 :Out	
10010000100100110010000100110001000 :(A lrot 5) + F + E + K 00101110100011000010110110111001 :Word 66	
:(A lrot 5) + F + E + K + Word 66 110010110011001001011011101000001 :temp	

10110011001001010011011101000001 :truncated temp	
101010111011010011100110110010	
:E = D	
01111001100010111000101110110011 :D = C	
00110101010010111001101001011111	
:C = B Left Rotate 30	
11000001001111010000010000101010 :B = A	
10110011001001010011011101000001	
:A = Temp	
W 1 67	
Word 67	
11000001001111010000010000101010	
:B 00110101010010111001101001011111	
:C	
B XOR C	_
11110100011101101001111001110101	
:Out	
11110100011101101001111001110101	
:B XOR C 01111001100010111000101110110011	
:D	
(D. WOD, C), WOD, D	
(B XOR C) XOR D 100011011111111010001010111000110	
:F	
11001010011000101100000111010110	
:K	
01100100101001101110100000110110 :A lrot 5	
1000110111111110100010101111000110	
:F	
:(A lrot 5) + F	
111110010101000111111111111111100	
:Out	
1111100101010001111111110111111100	
:(A lrot 5) + F 101010111011010011100110110010	
:E	
(A loot 5) F F	
:(A lrot 5) + F + E	

1010011110010110010011011110101110 :Out

1010011110010110010011011110101110 :(A lrot 5) + F + E 11001010011000101100000111010110 :K

:(A lrot 5) + F + E + K 111011010001011101111111100110000100 :Out

111011010001011101111111100110000100 :(A lrot 5) + F + E + K 1100000001001110010101011011000 :Word 67

:(A lrot 5) + F + E + K + Word 67 100000101001000010100100111001011100 :temp

00101001000010100100111001011100
:truncated temp
011110011000101111000101110110011
:E = D
001101010101010111001101001011111
:D = C
10110000010011110100000100001010
:C = B Left Rotate 30
10110011001001010110111011000001
:B = A
001010010000101001001111001011100
:A = Temp

Word 68

B XOR C 0000001101101101001111011001001011 :Out

00000011011010100111011001001011 :B XOR C 00110101010010111001101001011111 :D

(B XOR C) XOR D 00110110001000011110110000010100:F 1100101001100010110000011101011000100001010010011100101110000101:A lrot 5 00110110001000011110110000010100:F :(A lrot 5) + F10101011101101011110110111110011001 :Out 101010111011010111011011110011001 :(A lrot 5) + F01111001100010111000101110110011:Е :(A lrot 5) + F + E1111010000111101110100001101001100:Out 1111010000111101110100001101001100:(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K10010011011010110100000010100100010:Out 10010011011010110100000010100100010:(A lrot 5) + F + E + K00000001000110011101000111100010:Word 68

 $\begin{array}{l} 10011100011100111101011100000100 \\ :truncated\ temp \\ 0011010101010101111001101001011111 \\ :E=D \\ 10110000010011110100001000010001100 \\ :D=C \end{array}$

:(A lrot 5) + F + E + K + Word 68

:temp

110010011100011100111101011100000100

01101100110010010100110111011010000:C = B Left Rotate 30 0010100100001010010011110010111100:B = A10011100011100111101011100000100 :A = TempWord 69 00101001000010100100111001011100:B 01101100110010010100110111011010000:C B XOR C 01000101110000110000001110001100:Out 01000101110000110000001110001100:B XOR C 10110000010011110100000100001010 :D (B XOR C) XOR D 11110101100011000100001010000110 :F 11001010011000101100000111010110 10001110011110101110000010010011:A lrot 5 11110101100011000100001010000110:F :(A lrot 5) + F110000100000001110010001100011001 :Out 110000100000001110010001100011001:(A lrot 5) + F0011010101001011110011010010111111:Е :(A lrot 5) + F + E111011100101010101010111110101111000 :Out 111011100101010101010111110101111000

:(A lrot 5) + F + E

:K	
:(A lrot 5) + F + E + K 100100000111011010101111111101001110 :Out	
100100000111011010101111111101001110 :(A lrot 5) + F + E + K 10110001100001011110100011000110 :Word 69	
:(A lrot 5) + F + E + K + Word 69 11010011010101110110110100000010100 :temp	
0011010100111011011010000010100 :truncated temp 10110000010011110100000100001010 :E = D 0110110011001001010110111010000 :D = C 0000101001000001010010011110111 :C = B Left Rotate 30 1001110001110011110111100000100 :B = A	
:B = A 0011010101110110110100000010100 :A = Temp	
Word 70	
10011100011100111101011100000100 :B	
.B 00001010010000101001001110010111 :C	
B XOR C 1001011000110001010010010011 :Out	
10010110001100010100010010011 :B XOR C 01101100110010010100110111010000 :D	
(B XOR C) XOR D 111110101111110000000100101000011 ·F	

11001010011000101100000111010110 :K 10100111011011010000001010000110 :A lrot 5 111110101111110000000100101000011 :F :(A lrot 5) + F110100010011001010000101111001001:Out 110100010011001010000101111001001:(A lrot 5) + F10110000010011110100000100001010:E :(A lrot 5) + F + E1001010010101101000100110011010011:Out 1001010010101101000100110011010011:(A lrot 5) + F + E11001010011000101100000111010110 :K :(A lrot 5) + F + E + K1110001110100010111000011101010101 :Out 11100011101000101110000111010101001:(A lrot 5) + F + E + K10000100000100001100110110111101:Word 70 :(A lrot 5) + F + E + K + W ord 701111101000010010011111101110001100110 :temp 10100001001001111101110001100110 :truncated temp 011011001100100101001101111010000:E = D000010100100001010010011110010111:D = C

00110101001110110110100000010100:B = A 101000010010011111101110001100110:A = Temp

00100111000111001111010111000001

:C = B Left Rotate 30

Word 71	
00110101001110110110100000010100 :B 0010011100011100111	
:C B XOR C 00010010001001111001110110101 :Out	
00010010001001111001110111010101 :B XOR C	
00001010010000101001001110010111 :D	
(B XOR C) XOR D 00011000011001010000111001000010 :F	
11001010011000101100000111010110	
:K 00100100111110111000110011010100 :A lrot 5	
00011000011001010000111001000010 :F	
:(A lrot 5) + F 100111101011000001001101100010110 :Out	
100111101011000001001101100010110 :(A lrot 5) + F 01101100110010010100110111010000 :E	
:(A lrot 5) + F + E 1110101010001010011110100011100110 :Out	
1110101010001010011110100011100110 :(A lrot 5) + F + E 11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 1000111010010001100101010101111100 :Out	

100011101001000110010101010101111100 :(A lrot 5) + F + E + K 101100110010011011011001101101000 :Word 71

:(A lrot 5) + F + E + K + Word 71 110100100111101100110101111000100100 :temp

 $\begin{array}{l} 00100111101100110101111000100100\\ :truncated\ temp\\ 0000101001000001010010011110010111\\ :E=D\\ 0010011100011100111101111010111000001\\ :D=C\\ 000011010101011101101101101000000101\\ :C=B\ Left\ Rotate\ 30\\ 10100001001001001111101110001100110\\ :B=A\\ 001001111011001101011111000100100\\ :A=Temp\\ \end{array}$

Word 72

101000010010011111101110001100110
:B
00001101010011101101101000000101
:C

B XOR C 10101100011010010000011001100011 :Out

10101100011010010000011001100011 :B XOR C 00100111000111001111010111000001 :D

(B XOR C) XOR D 10001011011101011111001110100010 :F

:(A lrot 5) + F110000001111000011011100000100110:Out 1100000011111000011011100000100110:(A lrot 5) + F000010100100001010010011110010111:E :(A lrot 5) + F + E111000110000100100100101110111101:Out 111000110000100100100101110111101 :(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K10001010110100001110000110110010011 :Out 10001010110100001110000110110010011 :(A lrot 5) + F + E + K000101100110111110011100111110011:Word 72 :(A lrot 5) + F + E + K + W ord 72110001101100111101100100011110000110:temp 01101100111101100100011110000110:truncated temp 00100111000111001111010111000001

:truncated temp
0010011100011100111101110000011
:E = D
00001101010111011101101000000101
:D = C
10101000010010011111011100011001
:C = B Left Rotate 30
0010011110110011010111110001001
:B = A
01101100111101101000111110000110
:A = Temp

Word 73

:C	
B XOR C 1000111111111101010100100111101 :Out	
1000111111111101010100100111101 :B XOR C 00001101010011101101101000000101 :D	
(B XOR C) XOR D 1000001010110100011100110001 :F	
11001010011000101100000111010110 :K	
10011110110010001111000011001101 :A lrot 5 1000001010110100011100110001 :F	
:(A lrot 5) + F 10010000101111101011001000000101 :Out	
100100001011111010110010000000101 :(A lrot 5) + F 00100111000111001111010111000001 :E	
:(A lrot 5) + F + E 1101001000100110100101100111000110 :Out	
1101001000100110100101100111000110 :(A lrot 5) + F + E 11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 100000100101111111010001101110011100 :Out	
100000100101111111010001101110011100 :(A lrot 5) + F + E + K 00110110011100110100001100010010	

:Word 73

```
:(A \text{ lrot } 5) + F + E + K + W \text{ ord } 73
1100010010010111100000101111010101110\\
:temp
010010010111100000101111010101110\\
:truncated temp
00001101010011101101101000000101\\
:E=D
10101000010010011111011100011001\\
:D = C
000010011110110011010111110001001\\
:C = B \text{ Left Rotate } 30
011011001111011001000111110000110\\
:B = A
010010010111100000101111010101110\\
:A = Temp
Word 74
01101100111101100100011110000110\\
000010011110110011010111110001001\\
B XOR C
01100101000110101001000000001111\\
:Out
01100101000110101001000000001111\\
:B XOR C
10101000010010011111011100011001\\
:D
(B XOR C) XOR D
11001101010100110110011100010110\\
:F
11001010011000101100000111010110
00101110000010111101010111001001\\
:A lrot 5
11001101010100110110011100010110\\
:F
:(A lrot 5) + F
```

1111111011010111111001111100110111111

:Out

11111101101011111100111110011011111 :(A lrot 5) + F00001101010011101101101000000101:(A lrot 5) + F + E10000010001010111100001011011100100:Out 10000010001010111100001011011100100:(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K11011010011000100001101100010111010:Out 11011010011000100001101100010111010 :(A lrot 5) + F + E + K0001101100010111110011111111011000:Word 74 :(A lrot 5) + F + E + K + W ord 74111011101110001010000111100010010010 :temp 11101110001010000111100010010010:truncated temp 10101000010010011111011100011001:E = D000010011110110011010111110001001:D = C10011011001111011001000111100001:C = B Left Rotate 30010010010111100000101111010101110:B = A11101110001010000111100010010010:A = TempWord 75 0100100101110000010111101010111010011011001111011001000111100001 :C

B XOR C 11010010010011011100111101001111 :Out 11010010010011011100111101001111 :B XOR C 000010011110110011010111110001001(B XOR C) XOR D 11011011101000010001100011000110:F 1100101001100010110000011101011011000101000011110001001001011101:A lrot 5 11011011101000010001100011000110:(A lrot 5) + F110100000101100000010101100100011:Out 110100000101100000010101100100011:(A lrot 5) + F10101000010010011111011100011001:Е :(A lrot 5) + F + E1001001000111110100010001000111100:Out 10010010001111110100010001000111100:(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K111000100110101111001110010000010010:Out 111000100110101111001110010000010010:(A lrot 5) + F + E + K11011101110111101010001000111100:Word 75 :(A lrot 5) + F + E + K + W ord 75

11111111100010011110111000011001001110

:temp

11110001001110111000011001001110:truncated temp 000010011110110011010111110001001 :E = D10011011001111011001000111100001 :D = C100100100101111000001011110101011:C = B Left Rotate 30 11101110001010000111100010010010:B = A11110001001110111000011001001110:A = TempWord 76 11101110001010000111100010010010 100100100101111000001011110101011:C B XOR C 0111111000111010001101111100111001:Out 01111110001110100011011111001111001:B XOR C 10011011001111011001000111100001 :D (B XOR C) XOR D 111001110100100111111111011011000:F 11001010011000101100000111010110 :K 00100111011100001100100111011110:A lrot 5 111001110100100111111111011011000:F :(A lrot 5) + F100001110101110101100100010110110 :Out 100001110101110101100100010110110 :(A lrot 5) + F000010011110110011010111110001001:E :(A lrot 5) + F + E

11000110001010011110100000001111111 :Out

1100011000101001111010000000111111 :(A lrot 5) + F + E 11001010011000101100000111010110 :K

:(A lrot 5) + F + E + K 111111100011000010100110001000010101 :Out

11111100011000010100110001000010101 :(A lrot 5) + F + E + K 00111001010001010011100100110011 :Word 76

:(A lrot 5) + F + E + K + Word 76 100000011100010011111001101101001000 :temp

 $\begin{array}{l} 00011100010011111001101101001000 \\ :truncated\ temp \\ 100110110011110110010001111000001 \\ :E=D \\ 100100100101111000001011110101011 \\ :D=C \\ 1011101110001010100001111000100100 \\ :C=B\ Left\ Rotate\ 30 \\ 11110001001110111000011001001110 \\ :B=A \\ 000111000100111111001101101001000 \\ :A=Temp \end{array}$

Word 77

11110001001110111000011001001110 :B 10111011100010100001111000100100 :C

B XOR C 01001010101100011001100001101010 :Out

01001010101100011001100001101010 :B XOR C 100100100101111000001011110101011 :D (B XOR C) XOR D 110110001110110110001111111000001 :F 1100101001100010110000011101011010001001111100110110100100000011 :A lrot 5 110110001110110110001111111000001:F :(A lrot 5) + F1011000101110000011111100011000100:Out 1011000101110000011111100011000100:(A lrot 5) + F10011011001111011001000111100001 :Е :(A lrot 5) + F + E:Out :(A lrot 5) + F + E11001010011000101100000111010110:K :(A lrot 5) + F + E + K10011001000100000010100110001111011 :Out 10011001000100000010100110001111011 :(A lrot 5) + F + E + K00111000100010100001110011001000:Word 77

 $\begin{array}{l} 00000001000010110110100101000011\\ :truncated\ temp\\ 100100100101111000001011110101011\\ :E=D\\ 10111011100010100001111000100100\\ :D=C \end{array}$

:(A lrot 5) + F + E + K + Word 77

:temp

110100000001000010110110100101000011

10111100010011101110000110010011:C = B Left Rotate 30000111000100111111001101101001000:B = A00000001000010110110100101000011:A = TempWord 78 000111000100111111001101101001000:B 10111100010011101110000110010011:C B XOR C 10100000000000010111101011011011 :Out 10100000000000010111101011011011 :B XOR C 10111011100010100001111000100100 :D (B XOR C) XOR D 000110111000101101100100111111111:F 1100101001100010110000011101011000100001011011010010100001100000:A lrot 5 000110111000101101100100111111111:F :(A lrot 5) + F100111100111110001000110101011111 :Out 10011110011111100010001101010111111:(A lrot 5) + F100100100101111000001011110101011:Е :(A lrot 5) + F + E1111001111010101001010010100001010 :Out 1111001111010101001010010100001010

:(A lrot 5) + F + E

11001010011000101100000111010110 :K	
:(A lrot 5) + F + E + K 10010011001101101110110011011100000 :Out	
10010011001101101110110011011100000 :(A lrot 5) + F + E + K 10000000001110101110010111111100 :Word 78	
:(A lrot 5) + F + E + K + Word 78 110100011001111100100100110111100 :temp	
00011001111100100100110111100 :truncated temp 10111011100010100001111000100100 :E = D	
10111100010011101110000110010011 :D = C 00000111000100111110011011010010 :C = B Left Rotate 30 00000001000010110110100101000011	
:B = A 000110011111100100100110111100 :A = Temp	
Word 79	
00000001000010110110100101000011 :B	
00000111000100111110011011010010 :C	
B XOR C 00000110000110001000111110010001 :Out	
00000110000110001000111110010001 :B XOR C 10111100010011101110000110010011	
:D	
(B XOR C) XOR D 10111010010101100110111000000010 :F	

11001010011000101100000111010110 :K 0011111100100100110011011110000011:A lrot 5 10111010010101100110111000000010 :F :(A lrot 5) + F1111111000101000000000100110000101:Out 1111111000101000000000100110000101:(A lrot 5) + F10111011100010100001111000100100:E :(A lrot 5) + F + E1010110100001010100010011110101001:Out 1010110100001010100010011110101001:(A lrot 5) + F + E11001010011000101100000111010110 :K :(A lrot 5) + F + E + K111011111110100011001110100101111111 :Out 1110111111101000110011101001011111111:(A lrot 5) + F + E + K00111001010001110110001000110000:Word 79 :(A lrot 5) + F + E + K + Word 7911111011011111101010001001011110101111 :temp 101101111101010001001011110101111 :truncated temp 10111100010011101110000110010011:E = D000001110001001111110011011010010:D=C11000000010000101101101001010000 :C = B Left Rotate 300001100111111001001001100110111100:B = A

1011011111101010001001011110101111

:A = Temp

01100111010001010010001100000001 :h0	
10110111110101000100101110101111 :A	
:h0 + A 10001111100011001011011011010000 :h0	
11101111110011011010101110001001 :h1 00011001111100100100110011011100 :B	
:h1 + B 1000010011011111111111100001100101 :h1	
10011000101110101101110011111110 :h2 11000000010000101101101001010000 :C	
:h2 + C 10101100011111101101101101110 :h2	
00010000001100100101010001110110 :h3 00000111000100111110011011010010 :D	
:h3 + D 100010111010001100011101101001000 :h3	
11000011110100101110000111110000 :h4 101111100010011101110000110010011 :E	
:h4 + E 11000000001000011100001110000011 :h4	
00011111000110010110111010110000 :h0 truncated 00001001101111111111100001100101	

:h1 truncated

01011000111111011011011101001110

:h2 truncated

00010111010001100011101101001000

:h3 truncated

1000000001000011100001110000011

:h4 truncated

1f196eb0

:h0 in hex

9bff865

:h1 in hex

58fdb74e

:h2 in hex

17463b48

:h3 in hex

8021c383

:h4 in hex

1f196eb009bff86558fdb74e17463b488021c383

:digest

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