C:\Users\xiahaijiao\AppData\Local\Programs\Python\Python310\python.exe D:\Download\hs\code\gitee\python-demo\btc\python\sha256-2.py 0x18 ----- w begin ----i=0 0x61626380 $i=1 0 \times 0$ $i=2 0 \times 0$ i=3 0x0 $i=4 0 \times 0$ i=5 0x0 i=6 0x0 $i=7 0 \times 0$ i=8 0x0 i=9 0x0 i=10 0x0 i=11 0x0 i=12 0x0 i=13 0x0 i=14 0x0 i=15 0x18 i=16 0x61626380 i=17 0xf0000 i=18 0x7da86405 i=19 0x600003c6 i=20 0x3e9d7b78 i=21 0x183fc00 i=22 0x12dcbfdb i=23 0xe2e2c38e i=24 0xc8215c1a i=25 0xb73679a2 i=26 0xe5bc3909 i=27 0x32663c5b i=28 0x9d209d67 i=29 0xec8726cb i=30 0x702138a4 i=31 0xd3b7973b i=32 0x93f5997f i=33 0x3b68ba73 i=34 0xaff4ffc1 i=35 0xf10a5c62 i=36 0xa8b3996 i=37 0x72af830a i=38 0x9409e33e i=39 0x24641522 i=40 0x9f47bf94 i=41 0xf0a64f5a i=42 0x3e246a79 i=43 0x27333ba3

i=44 0xc4763f2 i=45 0x840abf27 i=46 0x7a290d5d i=47 0x65c43da i=48 0xfb3e89cb i=49 0xcc7617db

```
i=50 0xb9e66c34
i=51 0xa9993667
i=52 0x84badedd
i=53 0xc21462bc
i=54 0x1487472c
i=55 0xb20f7a99
i=56 0xef57b9cd
i=57 0xehe6h238
i=58 0x9fe3095e
i=59 0x78bc8d4b
i=60 0xa43fcf15
i=61 0x668b2ff8
i=62 0xeeaba2cc
i=63 0x12b1edeb
----- w end -----
                                                                                   g h T1 T2
t
                                                  d
                                                           e f
          0x6a09e667 0xbb67ae85 0x3c6ef372 0xa54ff53a 0x510e527f 0x9b05688c 0x1f83d9ab 0x5be0cd19 0x54da50e8 0x8909ae5 0x428a2f98 0x61626380
t=0
          0x5d6aebcd 0x6a09e667 0xbb67ae85 0x3c6ef372 0xfa2a4622 0x510e527f 0x9b05688c 0x1f83d9ab 0x3c5f8617 0x1e0b5396 0x71374491
t=1
                                                                                                                                       0×0
t=2
          0x5a6ad9ad 0x5d6aebcd 0x6a09e667 0xbb67ae85 0x78ce7989 0xfa2a4622 0x510e527f 0x9b05688c 0x3dc18b66 0x8b01bc41 0xb5c0fbcf
          0xc8c347a7 0x5a6ad9ad 0x5d6aebcd 0x6a09e667 0xf92939eb 0x78ce7989 0xfa2a4622 0x510e527f 0xbad621e9 0x1a7ad47d 0xe9b5dba5
t=3
                                                                                                                                       0x0
t=4
          0xd550f666 0xc8c347a7 0x5a6ad9ad 0x5d6aebcd 0x24e00850 0xf92939eb 0x78ce7989 0xfa2a4622 0xe642b678 0x1dfde3f2 0x3956c25b
                                                                                                                                       0x0
t=5
          0x4409a6a 0xd550f666 0xc8c347a7 0x5a6ad9ad 0x43ada245 0x24e00850 0xf92939eb 0x78ce7989 0x16d78700 0x146a82f5 0x59f111f1
                                                                                                                                       0x0
t=6
          0x2b4209f5  0x4409a6a 0xd550f666 0xc8c347a7 0x714260ad 0x43ada245 0x24e00850 0xf92939eb 0xd2645c5a 0x129ea726 0x923f82a4
                                                                                                                                       axa
t=7
          0xe5030380 0x2b4209f5 0x4409a6a 0xd550f666 0x9b27a401 0x714260ad 0x43ada245 0x24e00850 0x37148413 0x4e8bf74c 0xab1c5ed5
t=8
          0x85a07b5f 0xe5030380 0x2b4209f5 0x4409a6a 0xc657a79 0x9b27a401 0x714260ad 0x43ada245 0x2e899322 0x5f7b5997 0xd807aa98
                                                                                                                                       0x0
          0x8e04ecb9 0x85a07b5f 0xe5030380 0x2b4209f5 0x32ca2d8c 0xc657a79 0x9b27a401 0x714260ad 0xf187lba1 0x9b0018ca 0x12835b01
t=9
                                                                                                                                       0x0
t=10
          0x8c87346b 0x8e04ecb9 0x85a07b5f 0xe5030380 0x1cc92596 0x32ca2d8c 0xc657a79 0x9b27a401 0x5e682068 0xe930838c 0x243185be
                                                                                                                                       0x0
t=11
          0x4798a3f4 0x8c87346b 0x8e04ecb9 0x85a07b5f 0x436b23e8 0x1cc92596 0x32ca2d8c 0xc657a79 0xfbcf5b8a 0xfb506a1f 0x550c7dc3
                                                                                                                                       0x0
t=12
          0xf71fc5a9 0x4798a3f4 0x8c87346b 0x8e04ecb9 0x816fd6e9 0x436b23e8 0x1cc92596 0x32ca2d8c 0x9052955f 0xf73e9431 0x72be5d74
          0x87912990 0xf71fc5a9 0x4798a3f4 0x8c87346b 0x1e578218 0x816fd6e9 0x436b23e8 0x1cc92596 0xe7d31473 0xf15fd6a3 0x80deb1fe
t=13
                                                                                                                                       0x0
t=14
          0xd932eb16 0x87912990 0xf71fc5a9 0x4798a3f4 0x745a48de 0x1e578218 0x816fd6e9 0x436b23e8 0xc3fa4e18 0xfc6a11c6 0x9bdc06a7
                                                                                                                                       0x0
          0xc0645fde 0xd932eb16 0x87912990 0xf71fc5a9 0xb92f20c 0x745a48de 0x1e578218 0x816fd6e9 0x10394824 0xa0c0db6a 0xc19bf174
t=15
                                                                                                                                      0x18
t=16
          0xb0fa238e 0xc0645fde 0xd932eb16 0x87912990 0x7590dcd 0xb92f20c 0x745a48de 0x1e578218 0xf8a2f90c 0x2937a18f 0xe49b69c1 0x61626380
t=17
          0x21da9a9b 0xb0fa238e 0xc0645fde 0xd932eb16 0x8034229c 0x7590dcd 0xb92f20c 0x745a48de 0xab3bf93e 0x17bfe093 0xefbe4786
t=18
          0xc2fbd9d1 0x21da9a9b 0xb0fa238e 0xc0645fde 0x846ee454 0x8034229c 0x7590dcd 0xb92f20c 0xc253983 0xf252423c 0xfc19dc6 0x7da86405
t=19
          0xfe777bbf 0xc2fbd9d1 0x21da9a9b 0xb0fa238e 0xcc899961 0x846ee454 0x8034229c 0x7590dcd 0xff695deb 0xe288ae48 0x240ca1cc 0x600003c6
t=20
          0xe1f20c33 0xfe777bbf 0xc2fbd9d1 0x21da9a9b 0xb0638179 0xcc899961 0x846ee454 0x8034229c 0x68ffee95 0x34c69cce 0x2de92c6f 0x3e9d7b78
t=21
          0x9dc68b63 0xe1f20c33 0xfe777bbf 0xc2fbd9d1 0x8ada8930 0xb0638179 0xcc899961 0x846ee454 0x1e299f9f 0xa436cdce 0x4a7484aa 0x183fc00
t=22
          0xc2606d6d 0x9dc68b63 0xe1f20c33 0xfe777bbf 0xe1257970 0x8ada8930 0xb0638179 0xcc899961 0x4b7d958b 0x5c25ccb4 0x5cb0a9dc 0x12dcbfdb
t=23
          0xa7a3623f 0xc2606d6d 0x9dc68b63 0xe1f20c33 0x49f5114a 0xe1257970 0x8ada8930 0xb0638179 0xc855b714 0xfd7f8679 0x76f988da 0xe2e2c38e
t=24
          0xc5d53d8d 0xa7a3623f 0xc2606d6d 0x9dc68b63 0xaa47c347 0x49f5114a 0xe1257970 0x8ada8930 0x8a5d642e 0x91cec40a 0x983e5152 0xc8215c1a
          0x1c2c2838 0xc5d53d8d 0xa7a3623f 0xc2606d6d 0x2823ef91 0xaa47c347 0x49f5114a 0xe1257970 0x51d7d021 0x7c10335c 0xa831c66d 0xb73679a2
t=25
          0xcde8037d 0x1c2c2838 0xc5d53d8d 0xa7a3623f 0x14383d8e 0x2823ef91 0xaa47c347 0x49f5114a 0x1fa902d7 0x9685c1e5 0xb00327c8 0xe5bc3909
t=26
t=27
          0xb62ec4bc 0xcde8037d 0x1c2c2838 0xc5d53d8d 0xc74c6516 0x14383d8e 0x2823ef91 0xaa47c347 0x282a826b 0x4fa8f2bd 0xbf597fc7 0x32663c5b
          0x77d37528 0xb62ec4bc 0xcde8037d 0x1c2c2838 0xedffbff8 0xc74c6516 0x14383d8e 0x2823ef91 0x44e67b7f 0xf14e074a 0xc6e00bf3 0x9d209d67
t=28
          0x363482c9 0x77d37528 0xb62ec4bc 0xcde8037d 0x6112a3b7 0xedffbff8 0xc74c6516 0x14383d8e 0xdfff90ba 0xc0067a76 0xd5a79147 0xec8726cb
t=29
t=30
          0xa0060b30 0x363482c9 0x77d37528 0xb62ec4bc 0xade79437 0x6112a3b7 0xedffbff8 0xc74c6516 0x4adae67e 0x9fbe43a4 0x6ca6351 0x702138a4
          0xea992a22 0xa0060b30 0x363482c9 0x77d37528 0x109ab3a 0xade79437 0x6112a3b7 0xedffbff8 0x42859bea 0x312da00b 0x14292967 0xd3b7973b
t=31
t=32
          0x73b33bf5 0xea992a22 0xa0060b30 0x363482c9 0xba591112 0x109ab3a 0xade79437 0x6112a3b7 0x66a5732d 0x323bb1da 0x27b70a85 0x93f5997f
t=33
          0x98e12507 0x73b33bf5 0xea992a22 0xa0060b30 0x9cd9f5f6 0xba591112 0x109ab3a 0xade79437 0xb91e92a3 0x4541bb52 0x2e1b2138 0x3b68ba73
t=34
          0xfe604df5 0x98e12507 0x73b33bf5 0xea992a22 0x59249dd3 0x9cd9f5f6 0xba591112 0x109ab3a 0x1dc60e11 0x8be1657b 0x4d2c6dfc 0xaff4ffc1
t=35
          0xa9a7738c 0xfe604df5 0x98e12507 0x73b33bf5 0x85f3833 0x59249dd3 0x9cd9f5f6 0xba591112 0x80fcc6e1 0xe4a40903 0x53380d13 0xf10a5c62
          0x65a0cfe4 0xa9a7738c 0xfe604df5 0x98e12507 0xf4b002d6 0x85f3833 0x59249dd3 0x9cd9f5f6 0x6e917d64 0xd314df4d 0x650a7354 0xa8b3996
t=36
          0x41a65cb1 0x65a0cfe4 0xa9a7738c 0xfe604df5 0x772a26b 0xf4b002d6 0x85f3833 0x59249dd3 0xa6a75748 0x8e37bebc 0x766a0abb 0x72af830a
t=37
t=38
          0x34df1604 0x41a65cb1 0x65a0cfe4 0xa9a7738c 0xa507a53d 0x772a26b 0xf4b002d6 0x85f3833 0x46d0a83c 0x26f4d24e 0x81c2c92e 0x9409e33e
```

0x6dc57a8a 0x34df1604 0x41a65cb1 0x65a0cfe4 0xf0781bc8 0xa507a53d 0x772a26b 0xf4b002d6 0xb95af0bc 0xc08f77be 0x92722c85 0x24641522

t=39

t=40	0x79ea687a 0x6dc57a8a	0x34df1604	0x41a65cb1	0x1efbc0a0	0xf0781bc8	0xa507a53d	0x772a26b	0xe48ed0b2	0xf1d836b4	0xa2bfe8a1	0x9f47bf94
t=41	0xd6670766 0x79ea687a	0x6dc57a8a	0x34df1604	0x26352d63	0x1efbc0a0	0xf0781bc8	0xa507a53d	0x4eac110d	0x909a5422	0xa81a664b	0xf0a64f5a
t=42	0xdf46652f 0xd6670766	0x79ea687a	0x6dc57a8a	0x838b2711	0x26352d63	0x1efbc0a0	0xf0781bc8	0x7107cc8b	0xa6a24173	0xc24b8b70	0x3e246a79
t=43	0x17aa0dfe 0xdf46652f	0xd6670766	0x79ea687a	0xdecd4715	0x838b2711	0x26352d63	0x1efbc0a0	0x83b7e3b4	0x1993cbdf	0xc76c51a3	0x27333ba3
t=44	0x9d4baf93 0x17aa0dfe	0xdf46652f	0xd6670766	0xfda24c2e	0xdecd4715	0x838b2711	0x26352d63	0xd1a80a8a	0x54ba7d8b	0xd192e819	0xc4763f2
t=45	0x26628815 0x9d4baf93	0x17aa0dfe	0xdf46652f	0xa80f11f0	0xfda24c2e	0xdecd4715	0x838b2711	0xd82ef872	0x9a7c531f	0xd6990624	0x840abf27
t=46	0x72ab4b91 0x26628815	0x9d4baf93	0x17aa0dfe	0xb7755da1	0xa80f11f0	0xfda24c2e	0xdecd4715	0xbdd186ab	0xe37a8e05	0xf40e3585	0x7a290d5d
t=47	0xa14c14b0 0x72ab4b91	0x26628815	0x9d4baf93	0xd57b94a9	0xb7755da1	0xa80f11f0	0xfda24c2e	0x61835c33	0xdfeed65a	0x106aa070	0x65c43da
t=48	0x4172328d 0xa14c14b0	0x72ab4b91	0x26628815	0xfecf0bc6	0xd57b94a9	0xb7755da1	0xa80f11f0	0x970eb823	0x6e66c4c8	0x19a4c116	0xfb3e89cb
t=49	0x5757ceb 0x4172328d	0xa14c14b0	0x72ab4b91	0xbd714038	0xfecf0bc6	0xd57b94a9	0xb7755da1	0xfbb0ed7b	0xf56b0d2d	0x1e376c08	0xcc7617db
t=50	0xf11bfaa8 0x5757ceb	0x4172328d	0xa14c14b0	0x6e5c390c	0xbd714038	0xfecf0bc6	0xd57b94a9	0xb1a5b847	0xc85f505a	0x2748774c	0xb9e66c34
t=51	0x7a0508a1 0xf11bfaa8	0x5757ceb	0x4172328d	0x52f1ccf7	0x6e5c390c	0xbd714038	0xfecf0bc6	0x7b0e991	0x80bd9091	0x34b0bcb5	0xa9993667
t=52	0x886e7a22 0x7a0508a1	0xf11bfaa8	0x5757ceb	0x49231c1e	0x52f1ccf7	0x6e5c390c	0xbd714038	0x4d290015	0xc2f6d27a	0x391c0cb3	0x84badedd
t=53	0x101fd28f 0x886e7a22	0x7a0508a1	0xf11bfaa8	0x529e7d00	0x49231c1e	0x52f1ccf7	0x6e5c390c	0xae2b8d1b	0x4744a2c0	0x4ed8aa4a	0xc21462bc
t=54	0xf5702fdb 0x101fd28f	0x886e7a22	0x7a0508a1	0x9f4787c3	0x529e7d00	0x49231c1e	0x52f1ccf7	0x6b0912ae	0xd3bb4a2d	0x5b9cca4f	0x1487472c
t=55	0x3ec45cdb 0xf5702fdb	0x101fd28f	0x886e7a22	0xe50e1b4f	0x9f4787c3	0x529e7d00	0x49231c1e	0xcc5cac49	0x6c6fecca	0x682e6ff3	0xb20f7a99
t=56	0x38cc9913 0x3ec45cdb	0xf5702fdb	0x101fd28f	0x54cb266b	0xe50e1b4f	0x9f4787c3	0x529e7d00	0x8b3ebddd	0x7192ca9e	0x748f82ee	0xef57b9cd
t=57	0xfcd1887b 0x38cc9913	0x3ec45cdb	0xf5702fdb	0x9b5e906c	0x54cb266b	0xe50e1b4f	0x9f4787c3	0x88d3d0b3	0x378f03bc	0x78a5636f	0xebe6b238
t=58	0xc062d46f 0xfcd1887b	0x38cc9913	0x3ec45cdb	0x7e44008e	0x9b5e906c	0x54cb266b	0xe50e1b4f	0x2ebf62eb	0xd0f7a187	0x84c87814	0x9fe3095e
t=59	0xffb70472 0xc062d46f	0xfcd1887b	0x38cc9913	0x6d83bfc6	0x7e44008e	0x9b5e906c	0x54cb266b	0x794f142a	0x3d5f7bd5	0x8cc70208	0x78bc8d4b
t=60	0xb6ae8fff 0xffb70472	0xc062d46f	0xfcd1887b	0xb21bad3d	0x6d83bfc6	0x7e44008e	0x9b5e906c	0x994dc019	0x1f106cd0	0x90befffa	0xa43fcf15
t=61	0xb85e2ce9 0xb6ae8fff	0xffb70472	0xc062d46f	0x961f4894	0xb21bad3d	0x6d83bfc6	0x7e44008e	0xd42a5147	0x30a7fc25	0xa4506ceb	0x668b2ff8
t=62	0x4d24d6c 0xb85e2ce9	0xb6ae8fff	0xffb70472	0x948d25b6	0x961f4894	0xb21bad3d	0x6d83bfc6	0xfb5b0d9e	0xd83f13c7	0xbef9a3f7	0xeeaba2cc
t=63	0xd39a2165 0x4d24d6c	0xb85e2ce9	0xb6ae8fff	0xfb121210	0x948d25b6	0x961f4894	0xb21bad3d	0xa8467f25	0xa827b133	0xc67178f2	0x12b1edeb
t=final	0x506e3058 0xd39a2165	0x4d24d6c	0xb85e2ce9	0x5ef50f24	0xfb121210	0x948d25b6	0x961f4894				

h before 0x6a09e667 0xbb67ae85 0x3c6ef372 0xa54ff53a 0x510e527f 0x9b05688c 0x1f83d9ab 0x5be0cd19 h after 0xba7816bf 0x8f01cfea 0x414140de 0x5dae2223 0xb00361a3 0x96177a9c 0xb410ff61 0xf20015ad SHA-256 Hash: ba7816bf8f01cfea414140de5dae2223b00361a396177a9cb410ff61f20015ad

Process finished with exit code 0