SBCA LAB_1 Yegorov FI-03

Binary to Hex

```
console.log(big.binaryToHex( num: "00010100011110"))
51E

Process finished with exit code 0
```

From

Binary

To

Hexadecimal

Enter binary number

00010100011110   2

= Convert   **× Reset**   **↻ Swap**

Hex number

51E   16

Hex to Binary

```
console.log(big.hexToBinary( num: "AB12"));
1010101100010010


Process finished with exit code 0
```

From

Hexadecimal ⌄

To

Binary ⌄

Enter hex number

| AB12 | 16 |

= Convert **✕ Reset** **↻ Swap**

Binary number

| 1010101100010010 | 2 |

Sum of two 1024 bit numbers:

Num1 :

```
D4D2110984907B5625309D956521BAB4157B8B1ECE04043249A3D379AC112E5B9AF44E721E1
48D88A942744CF56A06B92D28A0DB950FE4CED2B41A0BD38BCE7D0BE1055CF5DE38F2A588C2
C9A79A75011058C320A7B661C6CE1C36C7D870758307E5D2CF07D9B6E8D529779B6B2910DD1
7B6766A7EFEE215A98CAC300F2827DB
```

Num2 :

```
3A7EF2554E8940FA9B93B2A5E822CC7BB262F4A14159E4318CAE3ABF5AEB1022EC6D01DEFAB
48B528868679D649B445A753684C13F6C3ADBAB059D635A2882090FC166EA9F0AAACD16A062
149E4A0952F7FAAB14A0E9D3CB0BE9200DBD3B0342496421826919148E617AF1DB66978B1FC
D28F8408506B79979CCBCC7F7E5FDE7
```

```
10F51035ED319BC50C0C4503B4D44872FC7DE7FC00F5DE863D6520E3906FC3E7E8761505118C918DB31AADBEA5A054B13A25F259CD47C1FAA7DB9B76F2DB450861BA26C4794E8E3BFBC2924DE45E47E5408536E3
548A03591DA0556D595AB78C55149F45170F2CB7736A46976D1C09BFCE4DF6EAB040599AF235968F8070E25C2

ADDITION: 54.299ms
```

Subtraction of two 1024 bit numbers:

Num1 :

```
87D6D58D3991D536544389CEFA72FD0EBED75B2EBDC2C79BC3717793108F0952011E7E2D704
0FFFB32F10BEB8ED0A485026B6860020B230128A8222B0525A6888942FB01C537800BF25D6F
021D4B99D3CBD6DF9055FA22F91A6CFC4FDFC408AEF78F6418D3CE4E20EC7888B61BAE3D73C
27C257CCA905DE0353C3A7CFFD9FE15
```

Num2 :

```
791EDB102DA183759979CEF70E1405AF14B98CD44357EADF6A8E35E49F99BB56CBD3F68897D
6E05502ED1DE14EC46D04F96992C2D129737987E84E62371648B37633794016852A8CBFFCFD
E06B17EC216AE8914D59E677A15A90361A594F0D1524A41AE63C59D343D4E522646722B0292
DD7C85571AC9A84FDA6CD2D8DE307F6
```

```
EB7FA7D0BF051C0BAC9BAD7EC5EF75FAA1DCE5A7A6ADCBC58E341AE70F54DFB354A87A4D86A1FA63003EE0A400C37800901D59D30E1AF87A0BFD3C8CE0F5DD5130F81C1AEB2557F32607121B233ADB260EE4E42F
C13AB57BFDCC6358674FB99D2EB493297747ADD17936651B48B8D4A94A45D2758E3C35B37956D4F71F6F61F

SUBTRACTION: 18.497ms


Process finished with exit code 0
```

Num1 :

8703A1E982F278420C2D60CA7A0ED76C91855E3147B50357074A04EAF6515F07C1D8967674C
7577D4112652E8135D145329F0DAE738F75C35004A154F1C43449DB87B6BE0F3EBF5B3BA101
6F0A04A10C7EA76C3D30EEDB34B1E6E1009B3FF5C987FA313097485E6F8C78744E2F49DF62D
13AD204E00F731BAE0E085C353D8D75

Num2 :

B3CEBC5B7F698FF87B7BED132D299F68010583247B9C9792E809ED86C07B4D65C9E83AEE308
97B0DAB7E5883EABE17B40B8F39267AC62377A6AFE0976AA0B81707282EB5FE59B66ED5EB1D
3118CA3555F3AFCC28990AB016FE5B89D9159E6BB26151C923501F69629A0D75A6C06B8D0AA
0364694DDCEDE35441E011347F85E62

```
/usr/local/bin/node /Users/ilyayegorov/Documents/SUCH/SBCM_LAB1/Yegorov_FI-03_Lab1/main.js
Negative Number
SUBTRACTION: 14.095ms

Process finished with exit code 0
```

Multiplication of two 1024 bit numbers:

Num1 :

170076B15F9575D21DE39D5C429799BBCDDB867016DE2248E3CFDE73A4D70C8636A9E41ABE6
71E7B9FB4739A5FF64DF9D0D3A64E0C9B20BFE58F1C62B28477EE9FD202010BAC440ADF3CA0
16A32DB844F23DEC2AB93AE869A6262FC23C5CE419807CDBA930A5433884E3B34B22477289B
D3A7712CDD4B4110BD9887E7428FDF7

Num2 :

9D1C2D6E1591932F73C2F499C4E0A2E252DE828CDA7842CE0972C4101FE772B56C45C475EDD
EDAEC2DBD13E375E02D2C149B69AB51FF3F94533CA34A815484EC86DACE936BDC62B5F3F9EB
6F5BE6BD253E256181D35D7D63EE24459824D462C53676E3DFF98700415ADA65FDA7CBD3B3F
359C817F52BEDA70C9DD85F68473C6

E1DD0ECBC8569D86631305BDF6715FFAE738E73504AC45962E5E8A4CCA58C2D7B5D56963ECBC7B581E820835EE00B1F6F4E43872F98CA5816E51A666B575C90A2FABBAC111435C86550EFDA9C4924D9A583777A0

A1DE78C286E2FD73CAA861C3EA1E84053258CA2A235AF93C8AC105A08D30499094643940D6D16598FBAE735944C2D41C2E1F01C97428069CF3427FB8ED246CF15F163DFC385EDADF2EBE1A8908ECA0A6D6F4B3808

FF1CB371BA03EFFEE3EFAF01E13673FCECA3A93CA89CBF8ABAEEF060B773F10B174A5E13BE3831195662FABDF07153F027C9617A67D65BCFB154EA70454CA6E8CDA2B118CF8A785AF2EDCBA40BE970FADCD57D8F

2662OA

SUBTRACTION: 428.761ms

Division of two 1024 bit numbers:

Num1:
170076B15F9575D21DE39D5C429799BBCDDB867016DE2248E3CFDE73A4D70C8636A9E41ABE6
71E7B9FB4739A5FF64DF9D0D3A64E0C9B20BFE58F1C62B28477EE9FD202010BAC440ADF3CA0
16A32DB844F23DEC2AB93AE869A6262FC23C5CE419807CDBA930A5433884E3B34B22477289B
D3A7712CDD4B4110BD9887E7428FDF7

Num2:
9D1C2D6E1591932F73C2F499C4E0A2E252DE828CDA7842CE0972C4101FE772B56C45C475EDD
EDAEC2DBD13E375E02D2C149B69AB51FF3F94533CA34A815484EC86DACE936BDC62B5F3F9EB
6F5BE6BD253E256181D35D7D63EE24459824D462C53676E3DFF98700415ADA65FDA7CBD3B3F
359C817F52BEDA70C9DD85F68473C6

```
/usr/local/bin/node /Users/ilyayegorov/Documents/SUCH/SBCM_LAB1/Yegorov_FI-03_Lab1/main.js

[

 '2',

 '35CF1039CE3436C2F6B3EC989FB855F837FB61E7B8F19EF22A185F1A0DA1E2F89212B8C00AB431E19FCD11DF13A48544E403918A25B38CD5B2787F96259E7510EF6A82E9E38B7B420BD62A8B7B0E0A04A793F

FA7ECF38BD2861A70F37C257C8D9ADFF2D317463305988668B6D4DF8133ECF3E0FCF2F365C2A45CD728728166B'

]

DIVISION: 118.403ms


Process finished with exit code 0
```

POW(x, y); x – 1024 bit

X:
8703A1E982F278420C2D60CA7A0ED76C91855E3147B50357074A04EAF6515F07C1D8967674C
7577D4112652E8135D145329F0DAE738F75C35004A154F1C43449DB87B6BE0F3EBF5B3BA101
6F0A04A10C7EA76C3D30EEDB34B1E6E1009B3FF5C987FA313097485E6F8C78744E2F49DF62D
13AD204E00F731BAE0E085C353D8D75

Y: ABC

```
/usr/local/bin/node /Users/ilyayegorov/Documents/SUCH/SBCM_LAB1/Yegorov_FI-03_Lab1/main.js

E2EF0B2009A38B3D2500E5650D767BD616F1E1DB5777DA63F2FCBD817227E5C83F48C6C95494B8B44F3258C0A5E094D74D19EFD4B3AF7719B20EFF6CD0D271F51915F16319805850EE00869AC63C77EDF567EC46

486DB92C453DC00BC7FF9CBE6D824790D2E77F41E5D29E5FCF8AB64ADFFCD5F5EEB4DF8D3625E1227C27E05C07831F154FEAAF8CCA7E553103C11F808A4499D3196F917234B42EF574FF96DCA44863C12F2C051E

8AE671110F0393DE65FF6B82198CF19253AB535B2D87FA95A44F0AA4CEE16D4D53438700DA8C8D6B046024C791033C4D7DC761CCCE1335A0894D3334314C5D458D9954D043AF993A7D9570837CAA4C7307D07E89

C19D0AD1

POWER: 17.483s
```