

Original string : DCBA

Number of bits: 24

30 chromosomes

First (original generation)

```
01 01 00 11 11 00 11 00 01 10 11 00
01 01 00 01 00 10 01 01 10 00 00 11
10 11 10 00 01 01 01 11 01 01 00 00
10 00 11 01 11 00 00 10 01 11 01 11
01 00 11 11 11 11 10 00 11 11 10 00
11 11 10 01 01 01 10 01 10 11 10 11
11 11 01 10 00 10 00 11 10 00 00 01
01 10 01 01 01 11 11 10 00 11 00 10
01 00 00 01 00 11 10 10 10 11 00 00
10 00 00 10 00 00 11 10 00 00 11 11
10 01 01 01 01 01 01 01 10 11 00 01
11 11 01 01 11 00 11 11 11 00 11 00
10 10 10 11 01 11 01 01 10 11 11 10
01 01 11 11 11 00 11 00 11 11 00 00
11 11 11 11 00 11 11 00 00 00 00 11
11 10 11 00 11 11 11 00 01 11 11 11
01 00 01 11 01 11 11 01 00 10 00 01
00 11 01 11 11 01 00 11 10 01 00 00
11 00 11 00 00 11 01 10 11 11 01 10
11 11 01 10 01 10 01 01 00 01 00 00
10 00 11 10 10 00 10 00 01 10 00 01
10 01 00 00 01 10 01 00 00 11 11 11
11 00 00 10 10 01 10 00 01 11 01 01
00 11 11 00 10 01 10 00 11 10 10 00
11 11 11 10 01 11 10 01 00 10 11 01
00 00 01 10 00 01 01 11 11 10 00 10
01 01 00 01 00 00 01 10 10 11 00 11
00 11 00 11 11 01 11 01 10 00 11 11
00 10 01 01 00 10 01 11 10 10 00 11
00 01 10 00 01 11 00 00 00 11 01 10
```

First generation, sorted by fitness:

```
11 00 11 00 00 11 01 10 11 11 01 10    fitness: 6
11 00 00 10 10 01 10 00 01 11 01 01    fitness: 6
10 00 11 10 10 00 10 00 01 10 00 01    fitness: 6
01 01 00 11 11 00 11 00 01 10 11 00    fitness: 6
01 00 01 11 01 11 11 01 00 10 00 01    fitness: 6
00 11 11 00 10 01 10 00 11 10 10 00    fitness: 6
00 11 01 11 11 01 00 11 10 01 00 00    fitness: 6
11 11 11 11 00 11 11 00 00 00 00 11    fitness: 5
11 11 01 10 00 10 00 11 10 00 00 01    fitness: 5
11 11 01 01 11 00 11 11 11 00 11 00    fitness: 5
10 11 10 00 01 01 01 11 01 01 00 00    fitness: 5
01 10 01 01 01 11 11 10 00 11 00 10    fitness: 5
01 01 11 11 11 00 11 00 11 11 00 00    fitness: 5
00 11 00 11 11 01 11 01 10 00 11 11    fitness: 5
00 01 10 00 01 11 00 00 00 11 01 10    fitness: 5
00 00 01 10 00 01 01 11 11 10 00 10    fitness: 5
11 11 11 10 01 11 10 01 00 10 11 01    fitness: 4
11 10 11 00 11 11 11 00 01 11 11 11    fitness: 4
10 00 11 01 11 00 00 10 01 11 01 11    fitness: 4
10 00 00 10 00 00 11 10 00 00 11 11    fitness: 4
01 00 00 01 00 11 10 10 10 11 00 00    fitness: 4
00 10 01 01 00 10 01 11 10 10 00 11    fitness: 4
10 01 01 01 01 01 01 01 10 11 00 01    fitness: 3
10 01 00 00 01 10 01 00 00 11 11 11    fitness: 3
01 01 00 01 00 10 01 01 10 00 00 11    fitness: 3
01 01 00 01 00 00 01 10 10 11 00 11    fitness: 3
11 11 10 01 01 01 10 01 10 11 10 11    fitness: 2
11 11 01 10 01 10 01 01 00 01 00 00    fitness: 2
10 10 10 11 01 11 01 01 10 11 11 10    fitness: 2
01 00 11 11 11 11 10 00 11 11 10 00    fitness: 2
Aver. fitness: 4.36667
```

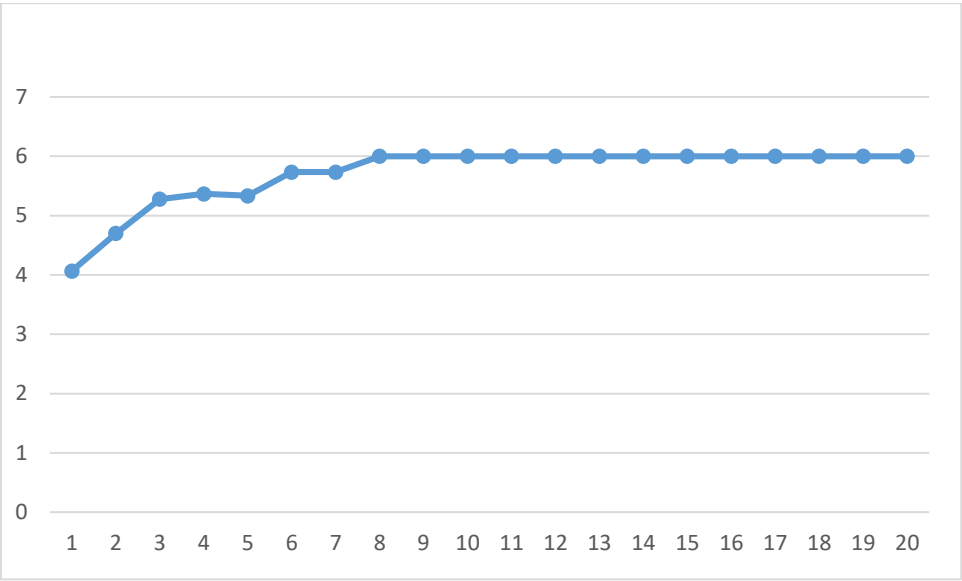
Middle generation, sorted by fitness:

11 00 11 00 00 11 01 10 11 11 00 00	fitness: 6
11 00 11 00 00 00 11 00 01 10 11 00	fitness: 6
11 00 00 10 10 01 10 00 01 10 11 00	fitness: 6
01 10 11 00 00 11 01 10 11 11 11 00	fitness: 6
01 10 11 00 00 11 01 10 11 11 01 10	fitness: 6
00 01 11 00 10 01 11 00 01 10 11 00	fitness: 6
00 11 11 00 10 01 11 00 01 10 11 00	fitness: 6
00 11 11 00 10 01 11 00 01 00 00 11	fitness: 6
00 11 11 00 10 01 10 00 01 10 11 00	fitness: 6
00 11 11 00 10 01 10 00 00 00 11	fitness: 6
11 11 11 11 00 11 11 00 00 00 00 11	fitness: 5
11 11 01 01 11 00 11 11 11 10 11 00	fitness: 5
11 11 01 01 11 00 11 11 11 10 11 00	fitness: 5
11 11 01 01 11 00 11 11 11 10 00 01	fitness: 5
11 11 01 01 11 00 11 11 11 10 00 01	fitness: 5
11 11 01 00 00 11 01 10 01 10 11 00	fitness: 5
11 00 11 00 00 11 11 01 10 00 11 11	fitness: 5
11 00 11 00 00 11 11 00 00 00 00 11	fitness: 5
11 00 11 00 00 11 01 11 11 10 00 01	fitness: 5
11 00 00 11 00 11 11 00 00 00 11 00	fitness: 5
11 00 00 11 00 11 11 00 00 00 00 11	fitness: 5
11 00 00 11 00 11 00 11 10 00 00 01	fitness: 5
10 00 11 10 10 00 11 00 00 00 00 11	fitness: 5
01 01 11 11 11 00 11 00 11 11 00 00	fitness: 5
01 00 11 00 00 11 11 01 00 11 11	fitness: 5
00 11 01 01 11 00 11 11 11 10 00 01	fitness: 5
11 11 01 10 00 10 00 00 11 10 11 00	fitness: 3
01 01 11 11 11 01 10 11 10 00 01	fitness: 3
01 01 11 11 10 01 10 00 01 11 01 01	fitness: 3
Aver. fitness: 5.13333	

Last generation, sorted by fitness:

11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
11	11	11	00	10	01	11	11	11	11	01	10
fitness:	6										
Aver.	fitness:	6									

Average fitness graph, 24 bits.



Original string : CDAB

Number of bits: 20

30 chromosomes

First (original generation)

```
00 00 11 11 11 01 01 00 10 00
11 00 11 00 11 11 10 10 00 11
11 11 11 10 00 00 11 10 01 01
01 00 01 10 00 00 11 10 00 00
01 01 01 11 11 01 11 01 11 11
11 00 11 10 00 00 00 00 11 10
10 01 00 01 00 01 10 11 10 01
01 11 00 00 01 10 00 10 10 11
10 01 10 10 11 00 11 01 00 00
10 10 01 01 10 11 10 01 01 11
00 11 11 00 11 10 01 01 10 11
01 10 00 01 10 10 10 11 11 00
01 11 11 01 01 01 00 01 10 10
00 00 10 10 00 11 11 00 11 11
10 00 00 10 00 01 00 11 00 01
01 10 10 01 00 00 10 01 10 00
00 00 01 11 11 00 10 10 11 00
00 01 11 01 11 10 10 11 01 10
10 00 01 11 11 10 11 11 01 01
00 11 00 11 10 00 11 11 10 10
11 00 11 11 10 11 10 10 11 01
00 11 11 10 11 10 00 11 01 01
01 10 01 11 11 11 00 11 11 01
11 10 00 11 10 00 01 00 00 11
10 01 00 01 11 01 11 11 10 10
10 11 11 10 11 00 00 00 11 10
10 00 11 11 01 00 11 00 10 01
10 01 11 10 00 00 11 11 00 11
00 00 10 00 01 11 00 01 00 11
11 00 00 10 00 00 10 01 11 00
```

First generation, sorted by fitness

10 01 00 01 00 01 10 11 10 01	fitness: 6
10 00 01 11 11 10 11 11 01 01	fitness: 6
00 00 10 00 01 11 00 01 00 11	fitness: 6
11 00 00 10 00 00 10 01 11 00	fitness: 5
10 01 00 01 11 01 11 11 10 10	fitness: 5
01 11 00 00 01 10 00 10 10 11	fitness: 5
01 10 00 01 10 10 10 11 11 00	fitness: 5
00 00 11 11 11 01 01 00 10 00	fitness: 5
11 10 00 11 10 00 01 00 00 11	fitness: 4
11 00 11 11 10 11 10 10 11 01	fitness: 4
10 01 11 10 00 00 11 11 00 11	fitness: 4
10 01 10 10 11 00 11 01 00 00	fitness: 4
10 00 11 11 01 00 11 00 10 01	fitness: 4
01 11 11 01 01 01 00 01 10 10	fitness: 4
01 10 01 11 11 11 00 11 11 01	fitness: 4
01 00 01 10 00 00 11 10 00 00	fitness: 4
00 11 00 11 10 00 11 11 10 10	fitness: 4
00 01 11 01 11 10 10 11 01 10	fitness: 4
11 00 11 10 00 00 00 00 11 10	fitness: 3
11 00 11 00 11 11 10 10 00 11	fitness: 3
10 11 11 10 11 00 00 00 11 10	fitness: 3
10 10 01 01 10 11 10 01 01 11	fitness: 3
10 00 00 10 00 01 00 11 00 01	fitness: 3
01 10 10 01 00 00 10 01 10 00	fitness: 3
01 01 01 11 11 01 11 01 11 11	fitness: 3
00 11 11 10 11 10 00 11 01 01	fitness: 3
00 11 11 00 11 10 01 01 10 11	fitness: 3
00 00 10 10 00 11 11 00 11 11	fitness: 3
00 00 01 11 11 00 10 10 11 00	fitness: 3
11 11 11 10 00 00 11 10 01 01	fitness: 2
Aver. fitness: 3.93333	

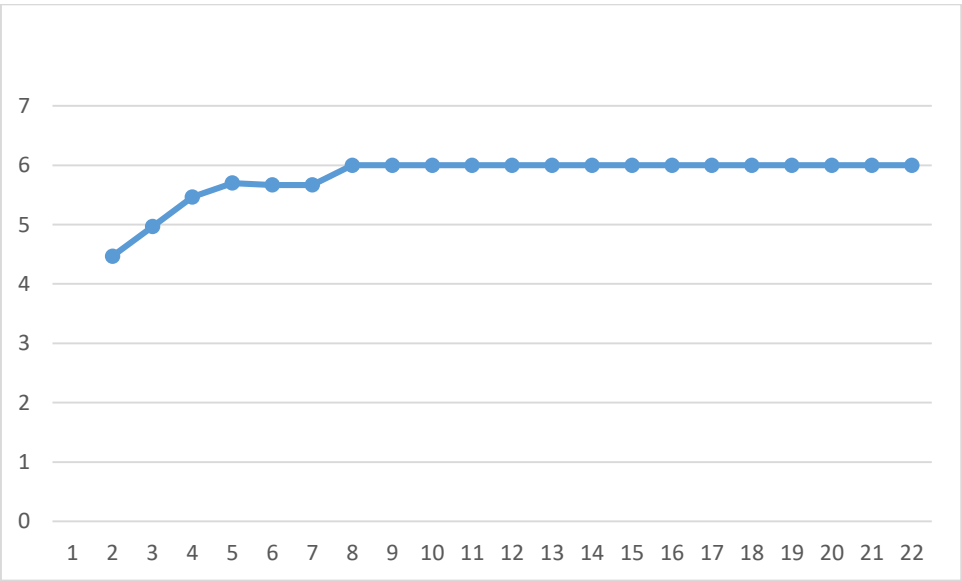
Middle generation, sorted by fitness

11 00 10 00 01 11 10 10 10 01	fitness: 6
11 00 10 00 01 11 10 01 11 00	fitness: 6
11 00 10 00 01 11 10 01 11 00	fitness: 6
01 11 00 11 10 00 01 00 00 11	fitness: 6
01 00 10 00 01 11 00 01 00 11	fitness: 6
01 00 10 00 01 11 00 01 00 11	fitness: 6
11 00 10 00 01 11 00 10 10 11	fitness: 5
11 00 10 00 01 11 00 10 10 11	fitness: 5
11 00 10 00 01 11 00 10 10 11	fitness: 5
11 00 10 00 01 11 00 10 10 11	fitness: 5
11 00 10 00 01 11 00 01 00 11	fitness: 5
11 00 00 10 00 00 10 01 11 00	fitness: 5
01 11 00 00 01 10 00 10 10 11	fitness: 5
01 11 00 00 01 10 00 10 10 11	fitness: 5
01 11 00 00 01 10 00 10 10 01	fitness: 5
01 11 00 00 01 10 00 10 10 01	fitness: 5
01 11 00 00 01 10 00 01 11 00	fitness: 5
01 11 00 00 01 00 10 01 11 00	fitness: 5
01 10 00 11 10 10 00 10 10 11	fitness: 5
01 10 00 11 10 00 01 00 00 11	fitness: 5
01 10 00 11 10 00 01 00 00 01	fitness: 5
01 10 00 11 10 00 01 00 00 01	fitness: 5
11 10 00 11 10 00 01 00 00 11	fitness: 4
11 00 10 00 10 00 01 00 00 11	fitness: 4
11 00 10 00 01 00 01 00 00 11	fitness: 4
11 00 00 10 00 00 00 01 00 01	fitness: 4
11 00 00 00 01 10 00 10 10 01	fitness: 4
01 11 00 00 01 10 10 11 11 00	fitness: 4
01 10 00 00 01 11 00 01 00 00	fitness: 4
00 00 10 11 10 00 01 00 00 11	fitness: 3
Aver. fitness: 4.9	

Last generation, sorted by fitness

11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
11 00 10 00 01 11 10 01 11 11	fitness: 6
Aver. fitness: 6	

Average fitness graph, 20 bit



String CBAD

12 bits

30 chromosomes

First generation:

```
11 10 10 00 00 01    fitness: 6
11 00 11 00 00 10    fitness: 6
10 11 10 11 10 00    fitness: 6
10 11 00 11 10 00    fitness: 6
10 11 00 10 10 10    fitness: 6
10 00 11 00 00 10    fitness: 6
10 00 10 00 11 10    fitness: 6
10 00 00 01 01 01    fitness: 6
00 10 11 01 01 11    fitness: 6
00 10 01 11 01 10    fitness: 6
11 11 10 01 00 01    fitness: 5
01 10 10 00 01 01    fitness: 5
11 11 01 01 00 01    fitness: 4
10 01 11 01 10 10    fitness: 4
10 01 10 11 01 01    fitness: 4
01 10 10 11 01 11    fitness: 4
01 10 01 01 11 10    fitness: 4
01 01 01 00 10 11    fitness: 4
01 00 11 00 01 00    fitness: 4
01 00 10 11 10 10    fitness: 4
01 00 00 01 01 01    fitness: 4
00 11 10 01 11 00    fitness: 4
00 11 01 10 00 00    fitness: 4
00 01 10 11 00 00    fitness: 4
00 00 01 00 11 01    fitness: 4
11 10 11 00 11 11    fitness: 3
10 11 11 11 11 10    fitness: 3
01 11 11 01 11 10    fitness: 3
00 11 10 11 01 01    fitness: 3
00 00 01 11 11 01    fitness: 3
Aver. fitness: 4.56667
```

Middle generation:

```
11 11 10 00 00 01    fitness: 6
11 10 10 00 00 01    fitness: 6
10 11 10 00 01 01    fitness: 6
10 11 00 11 10 00    fitness: 6
10 11 00 10 10 10    fitness: 6
10 11 00 10 10 10    fitness: 6
10 11 00 00 00 10    fitness: 6
10 00 11 00 00 10    fitness: 6
01 10 10 00 00 01    fitness: 6
00 10 11 01 01 11    fitness: 6
00 10 11 01 01 11    fitness: 6
00 10 10 00 00 01    fitness: 6
00 10 01 11 01 01    fitness: 6
00 10 01 11 00 10    fitness: 6
00 00 10 00 11 10    fitness: 6
11 11 10 01 00 01    fitness: 5
11 11 10 01 00 01    fitness: 5
10 01 10 00 11 10    fitness: 5
11 10 01 11 01 10    fitness: 4
11 00 00 01 01 01    fitness: 4
10 11 00 11 01 10    fitness: 4
10 11 00 11 00 01    fitness: 4
10 01 11 11 01 10    fitness: 4
10 01 11 01 11 10    fitness: 4
10 01 11 01 10 10    fitness: 4
10 01 10 11 01 10    fitness: 4
10 01 10 11 01 01    fitness: 4
01 11 01 01 00 01    fitness: 4
11 10 11 01 01 11    fitness: 3
10 11 00 11 10 10    fitness: 3
Aver. fitness: 5.03333
```

Last generation:

[illegible]

Average fitness graph, 12 bits:

