Binary Exercises

1.

* 1
* 101010
* 101110010
* 100000000000000000000000000000000

2

* 128
* 170
* 230
* 204

3

* 7 + 7 = 14
* 10 + 10 = 20
* 29 + 10 = 39
* 13 – 3 = 10
* 17 – 4 = 13
* 5 x 2 = 10
* 13 x 3 = 39
* 11 / 3 = 2 r 2

4

Hex numbers can store more data with less characters.

5

* 10101010 = 01010110 = 86
* 11110000 = 00011111 = 31
* 11001100 = 00110111 = 55
* -16 = 11110000
* -123 = 10000101

6

* 11111 | 11111 = 11111
* 11111 ^ 11111 = 00000
* 10101 & 11111 = 10101
* 10101 | 11111 = 11111
* 00000 ^ 11111 = 11111
* 1 << 3 = 1000
* 100 >> 2 = 1
* ~10101 = 01010
* 100 << 1 = 1000
* 1010 >> 1 = 101
* ~11111 = 00000