3-7 a
215/2 = 107   1
107/2 = 53   1
53/2 = 26   1
26/2 = 13   0
13/2 = 6   1
6/2 = 3   0
3/2 = 1   1
1/2 = 0   1
= 11010111

3-7 b
215 / 8 = 26   7
26 / 8 = 3   2
3 / 8 = 0   3
= 011 010 111

3-7 c
215/16 = 13   7
13/16 = 0   13 = D

3-7 d
2 = 0010
1 = 0001
5 = 0101
= 001000010101

3-9
075 121 117 109 105 110 032 076 101 101

3-12
999999 - 123900 = 876099
999999 - 090657 = 909342
999999 - 100000 = 899999
999999 - 000000 = 999999

3-15 a
  11010
- 10000
= 101010

3-15 b
  11010
- 1101
= 100111

3-15 c
      100
- 110000
= 110100

3-15 d
  1010100
- 1010100
= 10101000

5a
01101

5b
111110

5c
10111

5d
10000

5e
111011

5f
10100111111001101

5g
10111100100011111

6a
1110

6b
1D

6c
36

6d
21

7
00101010

8
-682

9
10001001

10
Not enough bits

11a
01001

11b
1111011

11c
1011100

12a
Overflow occurs

12b
Overflow doesn't occurs

13a
6

13b
-3

13c
111

13d
9444

14a
```
  0011
+ 1100
```
Doesn't overflow

14b
```
  0111
+ 1111
```
Overflow

14c
```
  1110
+ 1000
```
Overflow

14d
```
  0110
+ 0010
```

Doesn't overflow

15
a. 1111 + 1000
        overflow
b. 1100 + 0100
        overflow
c. 0100 + 0011
        Doesn't overflow
d. 0001 + 0111
        Doesn't overflow

16
a. 12 + 8 (Represent the numbers in 5-bit binary)
1100 + 01000
i. Overflow
ii. Overflow

b. A + 24 (Represent the numbers in 6-bit binary)
001010 + 100100
i. Doesn't overflow
ii. Doesn't overflow

17
0 10000000110000000000000000000000

18
52

19
1 10000010010110000000000000000

20

a.

NaN

b.

3.69858119398e+17

c.

-1.12474308752e-30

d.

-5.41829427332e-39