

# Task 1

1)

a. 27  $\Rightarrow$  11011

b. 55  $\Rightarrow$  110101

c. 63  $\Rightarrow$  111111

d. 145  $\Rightarrow$  10010001

e. 253  $\Rightarrow$  11111101

f. 12.5  $\Rightarrow$  1100.1

g. 25.25  $\Rightarrow$  11001.01

h. 43.625  $\Rightarrow$  101011.101

i. 125.125  $\Rightarrow$  111101.001

j. 206.02  $\Rightarrow$  11001110.000001010001111011

2)

a. 10  $\Rightarrow$  00001010

b. 10101010  $\Rightarrow$  170

c. 11001010  $\Rightarrow$  202

d. 10001110  $\Rightarrow$  142

e. 11011110  $\Rightarrow$  222

f. 01011010.10000000  $\Rightarrow$  90.5

g. 00101110.01010000  $\Rightarrow$  46.3125

h. 01010110.10101000  $\Rightarrow$  86.65625

i. 10101010.00110000  $\Rightarrow$  170.1875

j. 11111110.01101100  $\Rightarrow$  254.421875

3) a. AC  $\Rightarrow$  10101100

4) b. 1C  $\Rightarrow$  00011100

c. F7  $\Rightarrow$  11110111

d. D9  $\Rightarrow$  11011001

e. BE.A0  $\Rightarrow$  10111110.101

f. 7D.67  $\Rightarrow$  111101.01100111

g. 3F.F1  $\Rightarrow$  011111.11110001

h. 123.45  $\Rightarrow$  00100100011.01000101

i. ~~0101001100100~~ A04.BC  $\Rightarrow$  0101001100100.101111

j. 139.C4  $\Rightarrow$  0001000111001.110001

- 4)
- a.  $1000\ 1010 \Rightarrow \underline{8A}$
  - b.  $1011\ 1010 \Rightarrow \underline{BA}$
  - c.  $1010\ 1010 \Rightarrow \underline{AA}$
  - d.  $1100\ 1110 \Rightarrow \underline{CE}$
  - e.  $0111\ 1110 \Rightarrow \underline{7E}$

- f.  $0101\ 1010.1000\ 0000 \Rightarrow \underline{5A.8}$
- g.  $0010\ 1110.0101\ 0000 \Rightarrow \underline{2E.5}$
- h.  $0101\ 0110.1010\ 1000 \Rightarrow \underline{56.A8}$
- i.  $1010\ 1010.0011\ 0000 \Rightarrow \underline{AA.5}$
- j.  $1111\ 1110.0110\ 1100 \Rightarrow \underline{FE.6E}$

- 5)
- a.  $27 \Rightarrow \underline{1B}$
  - b.  $53 \Rightarrow \underline{35}$
  - c.  $63 \Rightarrow \underline{3F}$
  - d.  $145 \Rightarrow \underline{91}$
  - e.  $253 \Rightarrow \underline{FD}$
  - f.  $12.5 \Rightarrow \underline{C.8}$
  - g.  $25.25 \Rightarrow \underline{19.4}$
  - h.  $46.625 \Rightarrow \underline{2B.A}$
  - i.  $125.125 \Rightarrow \underline{7D.2}$
  - j.  $206.02 \Rightarrow \underline{CE.051EB851EB851EB851EC}$