

5.26 a)  $-30.5 \rightarrow 11110.100000_2$   
 $= 0xFA0$

b)  $16.25 \rightarrow 010000.010000_2$   
 $= 0x410$

c)  $-8.078125 \rightarrow 101000.000101_2$   
 $= 0xA05$

5.28 a)  $-30.5$   
 $\Rightarrow 100001.100000_2$   
 $\Rightarrow 0x860$

b)  $16.25$   
 $\Rightarrow 001111.110000_2$   
 $\Rightarrow 0x3F0$

c)  $-8.078125$   
 $\Rightarrow 010111.111011_2$   
 $\Rightarrow 0xDFB$

$11110.100000$   
 $000001.011111$   
 $100001.100000$   
 $010000.010000$   
 $101111.101111$   
 $101111.110000$   
 $101000.000101$   
 $010111.111010$   
 $010111.111011$

5.30 a)  $-30.5 \rightarrow 11110.1 = -1.11101 \times 2^4$   
 $127 + 4 = 131 \rightarrow 10000011_2$   
 $0xC1F40000$

1	1000 0011	111 0100 0000 0000 0000 0000
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b)  $16.25 \rightarrow 10000.01 = 1.000001 \times 2^4$   
 $127 + 4 = 131 \rightarrow 10000011_2$   
 $0x41820000$

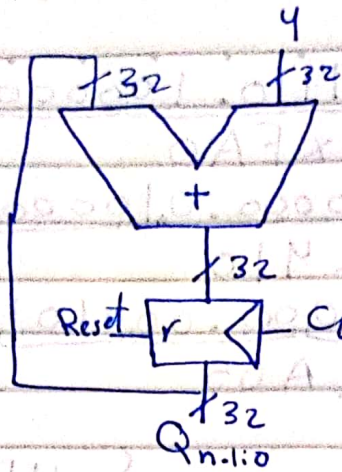
0	1000 0011	000 0010 0000 0000 0000 0000
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c)  $-8.078125 \rightarrow -01000.000101$   
 $= -1.000000101 \times 2^3$   
 $127 + 3 = 130 \rightarrow 10000010_2$   
 $0xC1014000$

1	1000 0010	000 0001 0100 0000 0000 0000
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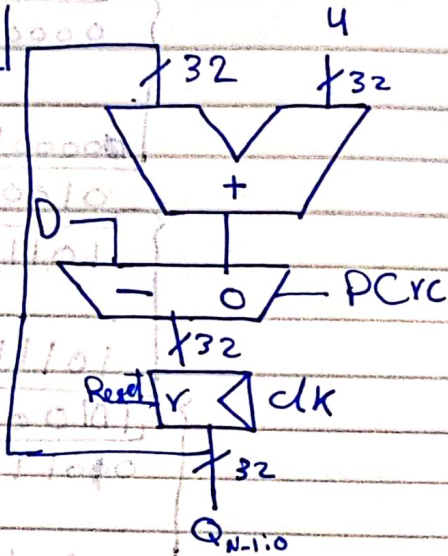
5.44



5.51

0	0	0	0
0	0	0	1
0	0	1	0
0	0	1	1
0	1	0	0
0	1	0	1
0	1	1	0
0	1	1	1
1	0	0	0
1	0	0	1
1	0	1	0
1	0	1	1
1	1	0	0
1	1	0	1
1	1	1	0
1	1	1	1

5.45



A, B, C, D, 4

$$X = AB + B\bar{C}D + \bar{A}\bar{B}$$

$$Y = AB + BD$$

$$Z = A + B + C + D$$