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Part A:
Question 1.
 BINARY = 11111111.011
Octal = 377.3
HEXAD = FF.6

Question 2.
53.625

Question 3.
We can write 100111 as $2^5 + 2^2 + 2^1 + 2^0$. we can find the remainder
individually by 3. that are -1, 1, -1 and 1. the sum of these remainders is 0.
hence the remainder of this number is 0

Question 4.
23 can be written as 00010111 in 8 Bits. finding the 2s compliment will give us
-23.
2s compliment = 1s compliment + 1
that is 11101000+1 = 11101001

Question 5.
F = (A+B)(A'+B)(B+C')
F=(AA'+AC+A'B+BC)(B+C') ==> AA'=0; AC+A'B+BC = AC+A'B (redundance formula)
F=ABC+A'BC'+ACC'+A'BB = ABC + A'B + A'BC' = ABC +A'B = B(A'+C) = A'B + BC

Question 6.
Making the K-map we see

A\BC	00	01	11	10
1	0	1	1	0
0	0	1	1	0

we can make a pair of 4 numbers hence the F gives F=C