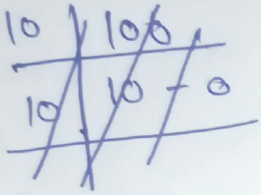
Name: Muhammad Abeer
Section: 5-B
Roll No: 19P-0061

Number = 100.875

Step 1

Converting Decimal to Binary



2	100
2	50 - 0
2	25 - 0
2	12 - 1
2	6 - 0
2	3 - 0
2	1 - 1

$(100)_{10} \rightarrow (1100100)_2$

$0.875 \times 2 = 1.75$
$0.75 \times 2 = 1.5$
$0.5 \times 2 = 1$

$(0.875)_{10} = (0.111)_2$

$(100.875)_{10} = (1100100.111)_2$

Step 2

"Finding Exponent"

1100100.111

Exponent = 6

Biased Exponent = 6 + 127

$= (133)_{10}$

2	133
2	66 - 1
2	33 - 0
2	16 - 1
2	8 - 0
2	4 - 0
2	2 - 0
	1 - 0

$(133)_{10} = (10000101)_2$

Step 3

Finding Mantissa

Mantissa = 10010011000000000000000

Final

0	10000101	10010011000000000000000