HW#1 SOLUTIONS

4 DIRECTIONS

2 BITS
$$\rightarrow$$
 2 \rightarrow 4 POSSIBILITIES
NORTH \rightarrow 00
SOUTH \rightarrow 01 ONE TYPE OF CODING.
EAST \rightarrow 10
WEST \rightarrow 11

FOR ADDITIONAL P DIRECTIONS -> 3 BITS.

3 BIB - 23 -> 8 POSSIBILITIES COVERING ALL & DIRECTIONS.

2) 7 BIT BINARY WORD
$$\rightarrow$$

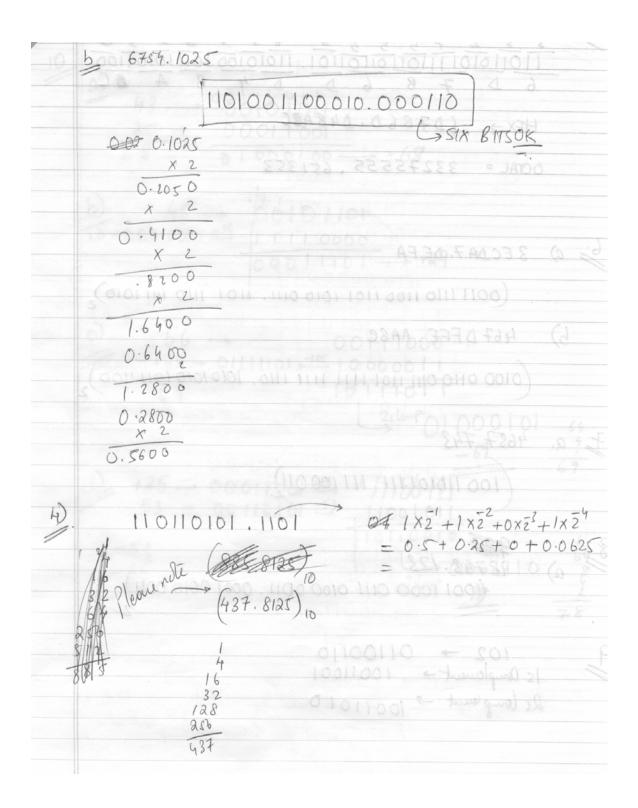
UNSIGNED \rightarrow $2^7 = 128$

RANGE = 0 to 127

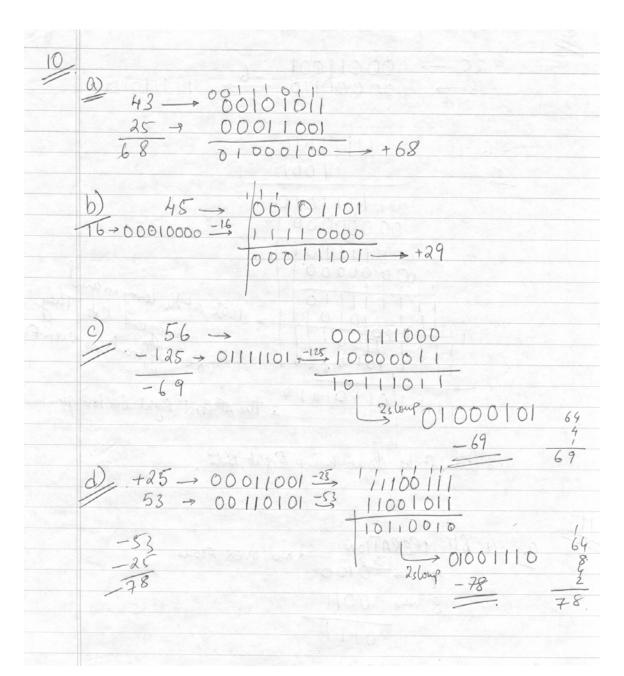
SIGNED \rightarrow RANGE \rightarrow -2 to 2^{7-1}
 $= -64$ to 63 .

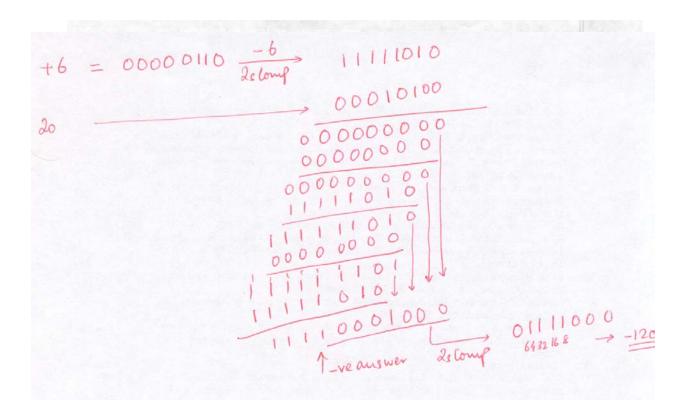
0.500

3) a) 245.625 $245 \rightarrow 11110101$ 0.625 $\frac{x^2}{1.250}$ 0.500 $\frac{x^2}{1.00}$ 0.250 $\frac{x^2}{1.00}$ 1.101



3 2 7 5 5 5 6 5 1 3 5 3 6 1101101011101101101101. 11010100 101110101100 6 D 7 B 6 D D 4 B A &C 6D7B6D. D4BACC HEX > 33275555.651353 GCTAL = 3 ECDA 7. DEFA (0011 1110 1100 1101 1010 0111. 1101 1110 1111 1010) 467 DFFE, AABC 0100 0110 0111 1101 1111 1110, 1010 1010 1011 1100), I a. 4657.743 100 110101111. 111100011) 98743.123 (1001 1000 0111 0100 0011, 0001 0010 0DII 102 → 01100110 15 Complement → 10011001 25 long level -> 10011010





a. 4 BIT OPERATION

4 - 0100

3 - 0011

0111

Apr 4 > 0100

13 - Cound be represented using 4 Bits

full points if you have allempted it.

