Lab-2 Conversions

0.25_{10}, Base 2, 8, 16

$0.25 \times 2 = \underline{0.5}$

$.5 \times 2 = 1.0 \rightarrow 0.01_2$

$0.25_{10} \times 8 = 2.0 = .2_8$

$0.25_{10} \times 16 = 4.0 = .4_{16}$

0.25_8, Base 2, 10, 16

$0.25_8 = .2 \times 8^{-1} + 5 \times 8^{-2}$

$0.25 + 0.08 = 0.33_{10}$

$0.33_{10} \times 2 = \underline{0.66} \times 2 = 1.32 = 0.013_2$

$0.33_{10} \times 16 = 5.3 = .53_{16}$

1. c

0.25_{16}, Base 2, 8, 10

$0.25_{16}/16 = 0.52_{10}$

$0.52_{10} \times 8 = 4.16 = 0.4_8$

$0.52_{10} \times 2 = 1.04 = 0.01_2$

0.1101_2, Base 8, 10, 16

$0.1101_2 \rightarrow$ Base 8

$0.1101_2 \rightarrow .15_8$

$0.15_8 = 1 \times 8^{-1} + 5 \times 8^{-2}$

$0.125 + 0.063 = 0.188_{10}$

$0.188_{10} \times 16 = 3 = 0.003_{16}$