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Birzeit University
Department of Electrical & Computer Engineering
 Digital Systems - ENCS 2340
 First Semester 2024/2025

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Quiz #1
 09.10.2024

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A) Perform subtraction on the given unsigned binary numbers using the 2's complement of the subtrahend. Where the result should be negative, find its 2's complement and affix a minus sign.

1001 - 111101 =
 $\begin{array}{r} 1001 \\ - 111101 \\ \hline \end{array}$

a) (1010100)

b) -(101100)

c) (101100)

d) -(110100)

e) none of the above

$\begin{array}{r} 1001 \\ 000011 + \\ \hline 001100 \\ 110100 \end{array}$

$\begin{array}{r} 1001 \\ 000011 + \\ \hline 001100 \\ - 110100 \end{array}$



B) Express the following numbers in decimal: (26.22)₈

a) 16.0125

b) 22.3125

c) 16.25

d) 22.28125

e) none of the above

$6 + 2 \times 8 = 22$

$\frac{2}{8} + \frac{2}{64} = \frac{1}{4} + \frac{1}{32} = (\frac{1}{2} \cdot \frac{1}{16})$

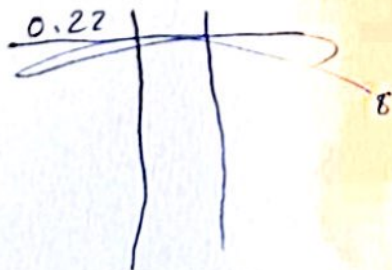
0.25 +

$\begin{array}{r} 0.0625 \\ \hline \end{array}$

$\begin{array}{r} 0.03125 \\ \hline \end{array}$

$\begin{array}{r} 0.25 \\ \hline 0.28125 \end{array}$

$\begin{array}{r} 0.25 \\ - 0.28 \\ \hline 125 \\ 500 \\ \hline 0.0625 \end{array}$



good luck