

Discrete Structures Sample Quiz: Number Bases

Remarks:

- The first four problems in the quiz will be identical to the following four problems but with different numbers and bases.
 - In the quiz there will be two additional problems that are different from these sample problems.
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1. Write the decimal number $(22)_{10}$ in its binary (base-2) and its ternary (base-3) representations.

2. Write the twelve decimal numbers $(1)_{10}, (2)_{10}, \dots, (12)_{10}$ in their base-4 representation.

3. Which number is larger $(321)_4$ or $(111001)_2$?

4. In the base-13 system: $A = 10$, $B = 11$, and $C = 12$. What is the decimal value of the number $(CAB)_{13}$?