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AP Computer Science

Mrs. White

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Algorithm

Take each individual chunk of numbers from the encoded message

Divide each chunk by 16

Keeping track of the remainders

Assign the quotient and remainders to one string

Loop through the string

Replace any eligible digits (10-15) with A-F according to their value

Assign the complete alphanumeric result to a string

Calculate permutations of the data

Calculate combinations of the data

Based on calculations, look for potential rearrangements of the letters.

Sort out the remaining numbers

Assign them to a string

Loop through the string replacing each remaining number with their corresponding letter of the alphabet (1 = A)

Integrate this new alphabetic string into the original rearrangement

Calculate permutations of the data

Calculate combinations of the data

Make final rearrangements until a sensible message is found.

Suggested response:

Text: Hello, we are humans! We mean no harm!

Binary: 01001000 01100101 01101100 01101100 01101111 00101100 00100000 01110111 01100101 00100000 01100001 01110010 01100101 00100000 01101000 01110101 01101101 01100001 01101110 01110011 00100001 00100000 01010111 01100101 00100000 01101101 01100101 01100001 01101110 00100000 01101110 01101111 00100000 01101000 01100001 01110010 01101101 00100001

Hex: 48 65 6c 6c 6f 2c 20 77 65 20 61 72 65 20 68 75 6d 61 6e 73 21 20 57 65 20 6d 65 61 6e 20 6e 6f 20 68 61 72 6d 21

Base64: SGVsbG8sIHdlIGFyZSBodW1hbnMhIFdlIG1lYW4gbm8gaGFybSE=

ASCII dec/char: 72 101 108 108 111 44 32 119 101 32 97 114 101 32 104 117 109 97 110 115 33 32 87 101 32 109 101 97 110 32 110 111 32 104 97 114 109 33