CN LAB SESSION 18FEB

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Q. A sender computes a checksum by summing bytes of data: 1010 1100 + 0110 1010. What is the checksum?

Solution:

Add the binary numbers

1010 1100

+ 0110 1010

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0001 0110 0110

The result is **9 bits** (01 0110 0110), but since a checksum typically fits in 8 bits, the carry bit must be added back to the sum.

Therefore 1 is to be added to the answer:

0001 0110 0110 (includes carry)

+ 1 (carry added back)

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0001 0110 0111

The final sum in 8 bits is 0110 0111.

The checksum is typically the one's complement of the sum:

One's complement of 0110 0111 is 1001 1000.

Final Checksum: 1001 1000 (in binary**) .**