

TMC Learn2Code Week 2: In-Class Problems

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1 Homework Review

Take a few minutes to discuss anything interesting, challenging, or otherwise noteworthy in the homework. Review any specific homework problems or topics that members of your groups had difficulty with or have lingering questions about. Flag down a teaching assistant if needed.

2 Binary

A Write down a procedure (an algorithm) for converting whole decimal numbers into binary numbers.

B Do the reverse- Write down an algorithm for converting binary numbers into whole decimal numbers.

C Decide as a group on some kind of information that would be difficult, perhaps impossible, to encode in binary. Write down what it is and why it is difficult to encode.

Next, formulate a few approaches on how to encode that information in binary and discuss their shortcomings and strengths. Write down your best approximation for how to encode this information in binary and why you chose this approach.

3 Boolean Logic and Inequalities

Determine what the following lines of code evaluate to without running the code. If you get stuck on a complex expression, evaluate it step by step. Several of these expressions are too complex to evaluate the answer at a glance. Take your time. Look up any unfamiliar syntax in eloquent JS chapter 1.

You can execute the code to check your answer after working it out by hand.

- A)** `0 || 1 || 0 || 0 || 0`
- B)** `!!!!(5 === 5)`
- C)** `!((3 > 2 && true) || true)`
- D)** `'Words' === 'Words'`
- E)** `'Words' === 'words'`
- F)** `'Words' === 'Words' === 'Words'`
- G)** `(true || false) && (false || false)`
- H)** `!(3 > 2 && true) || true`
- I)** `false || 'chicken'`
- J)** `('key'+ 'board') !== 'keyboard' || 'KeYBoaRD'`
- K)** `((true || true || true || true || false) === ! true) ? 0 : 1`
- L)** `Boolean(!(1||0) ? undefined : null) ? 'no way' : 'yes way'`

4 Coding Practice

Continue the remaining exercises of freeCodeCamp's introduction to javascript as a group: <https://learn.freecodecamp.org/javascript-algorithms-and-data-structures/basic-javascript>

Ensure that everyone in the group understands the code implemented before moving to the next problem.