MITx 6.004.1x
Computation Structures 1: Digital Circuits

Help

selfpoised ⌄

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WE1.1

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Video explanation of solution is provided below the problem.

Quantifying Information

2/2 points (ungraded)

For the problems below enter your responses as a formula in the form log2(X/Y) where X and Y are integers, or as an integer number of bits.

1) Someone picks a name out of a hat known to contain the names of 5 women and 3 men, and tells you a man has been selected. How much information have they given you about the selection?

| log2(8/3) | ✔ |

$$\log_2 \left(\frac{8}{3} \right)$$

2) You are asked to guess a random 4-bit 2's complement number. I then tell you that the number is >0. How much information have you been given?

| log2(16/7) | ✔ |

$$\log_2 \left(\frac{16}{7} \right)$$

| Submit |

Quantifying Information

$P_{man} = \frac{3}{8}$

$$\log_2 \left(\frac{1}{3/8} \right) = \log_2 \left(\frac{8}{3} \right)$$

N = original number of choices   M = reduced number of choices

(Caption will be displayed when you start playing the video.)

▶ 0:00 / 0:00   ▸ 1.0x   ◆))   ✕   CC   ❝❝
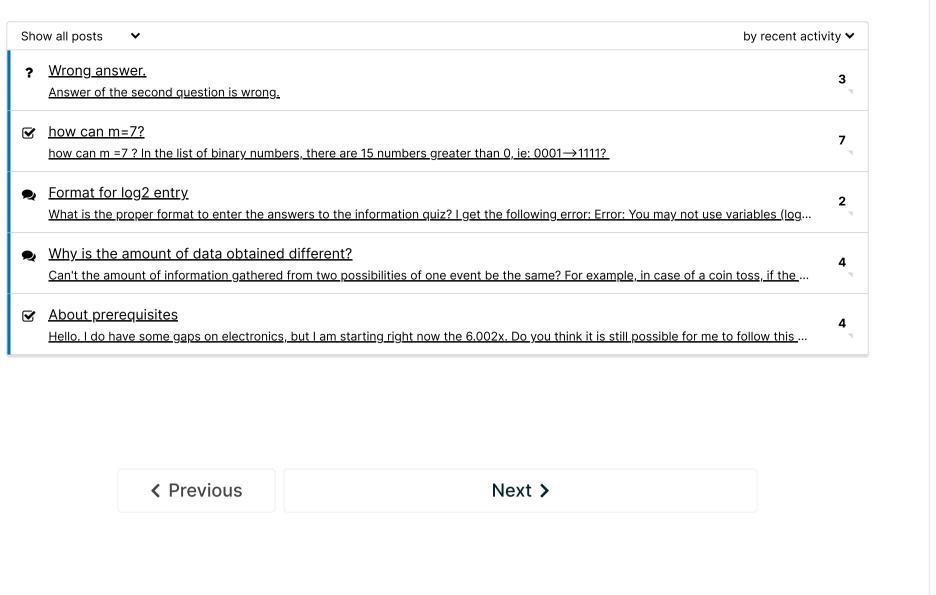
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?	**Wrong answer.** Answer of the second question is wrong.	**3**
☑	**how can m=7?** how can m =7 ? In the list of binary numbers, there are 15 numbers greater than 0, ie: 0001→1111?	**7**
💬	**Format for log2 entry** What is the proper format to enter the answers to the information quiz? I get the following error: Error: You may not use variables (log…	**2**
💬	**Why is the amount of data obtained different?** Can't the amount of information gathered from two possibilities of one event be the same? For example, in case of a coin toss, if the …	**4**
☑	**About prerequisites** Hello. I do have some gaps on electronics, but I am starting right now the 6.002x. Do you think it is still possible for me to follow this …	**4**

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