

NAME: _____

CAS 2013 extremely short and easy quiz #1

2 points per correct answer + 2 points for turning in the quiz with your name on it

CIRCLE the ONE correct answer for each question based on Mitchell chapters 3 & 4

1. Maxwell's Demon
 - a. demonstrated that recording and erasing information can both be done without performing work
 - b. presented a paradox because it appeared to decrease entropy without any work being done
 - c. showed that the total amount of energy in the universe is always increasing
 - d. showed that some things can not be computed

2. Given person A who can only communicate with the syllable "da" and person B who has full use of the English language, if person A transmits Message A "da da da da da da da da" and Person B transmits Message B "quizzes are good", which message contains more information?
 - a. Message A
 - b. Message B
 - c. They contain equal information because they are the same length
 - d. It can not be determined

3. David Hilbert asked three questions:
 1. Is mathematics complete?
 2. Is mathematics consistent?
 3. Is every statement in mathematics decidable?

Which ONE of the following statements is TRUE

- a. The answers to 1 & 2 are yes, 3 is no.
 - b. The answer to all three questions is no.
 - c. Godel showed that 1 & 2 can not both be 'yes'
 - d. Turing showed that the answer to 3 is yes
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4. Which of the following is FALSE
 - a. The input to a Turing machine can be the code of another Turing machine
 - b. Turing rigorously defined the notion of a definite procedure
 - c. Turing solved the Halting Problem
 - d. Turing showed that there can be no definite procedure for solving the Halting Problem