CS2223 D Term 2020 Quiz 20 "Field Trip"

(1 point) Question 1: "My brain is open. . . ."
I pledge that I am taking this quiz on my own, with help from no one else and no notes:

(3 points) Question 2: Today's Skill Sharing Bonanza is being sponsored by the WPI student-led chapter of what national organization (which you should consider joining)?

a.) ACM — Association for Computing Machinery
b.) AMS — American Mathematical Society
c.) IEEE — Institute of Electrical and Electronics Engineers
d.) MAA — Mathematical Association of America
e.) Scientific American

(3 points) Question 3: The seven pieces in the Soma Cube are identified by enthusiasts as:

a.) Zero, One, Two, Three, Four, Five, and Six.
b.) One, Two, Three, Four, Five, Six, and Seven.
c.) A, B, L, P, T, V, and Z.
d.) Alpha, Beta, Lambda, Pi, Tau, Upsilon, and Zeta.
e.) Grumpy, Doc, Happy, Sleepy, Sneezy, Bashful, and Dopey.

(3 points) Question 4: Professor Heineman uses a backtracking algorithm to solve the Soma Cube Puzzle. What condition(s) would likely cause the algorithm to backtrack?

a.) A newly placed piece overlaps another piece already placed in at least one block
b.) A newly placed piece has a block that juts outside the 3x3x3 solution region
c.) A newly placed pieces duplicates the same shape of an already placed piece
d.) a) and b)
e.) b) and c)

(1 point) Bonus Question: Professor Heineman's method models the individual multi-block pieces of the Soma Cube. . .

a.) As explicit 3- and 4-tuples.
b.) As explicit 2-dimensional binary arrays.
c.) As explicit 3-dimensional binary arrays.
d.) With instructions that add block by block starting with an Anchor block at (0,0)
e.) With instructions that add block by block to previously placed pieces.