

Quiz 2
20 minutes

- Turn off and put away cell phones, graphing calculators, books and notebooks.
- You may use one 8.5 by 11 sheet of handwritten notes and a non-graphing calculator. Do not share notes or calculators.
- In order to receive credit, you must **show your work and explain your reasoning**, and give exact answers.
- You can use both sides of the page. Please indicate question number and box your final answer.
- When using multiple sheets of paper, please indicate your name on each sheet.

Question 1

Compute the area of that part of the plane $x + y + z = 2a$, which lies in the first octant $x \geq 0, y \geq 0, z \geq 0$ and is bounded by the cylinder $x^2 + y^2 = a^2$.

Question 2

Find the coordinates of the center of mass of a lamina which is in the shape of a half disk of radius a , i.e., $\{(x, y) \mid y \geq 0, x^2 + y^2 \leq a^2\}$, and whose density is uniform.

