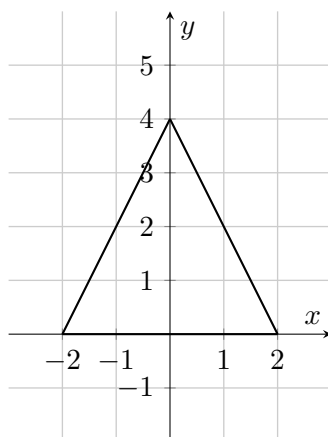


4. [5 points] Find the derivative of $f(x) = 3e^{-2x} \cos(5x)$. You do not need to simplify your answer.

5. [7 points] Nzinga is going rock climbing at a local climbing gym. The gym building is shaped as follows. Its base is the triangular region shown in the figure below. The cross sections of the gym perpendicular to the y -axis are semicircles.



Write, but do not evaluate, an integral which gives the volume enclosed by the building.