

Stadium Construction

You are Chief Mathematician for a construction company. Your company has a contract to build a football stadium in the form of two concentric ellipses, with the field inside the inner ellipse, and seats between the two ellipses. The seats are in the intersections of the graphs of $x^2 + 4y^2 \geq 100$ and $25x^2 + 36y^2 \leq 3600$, where each unit on the graph represents 10 meters. The Engineering Department estimates that each seat occupies 0.8 square meters.

Create an accurate scale drawing of the seating area using graph paper or online graphing tool. Find the seating capacity of the stadium.

Assignment Guidelines:

- *explain step by step your process as if you are presenting a report to your boss*
- *create a neat easy to read description so your boss can follow and pass it on to his boss*

Notes: This project could be expanded to include options for seating and the prices for each type of seating. It could include skyboxes.....