Two-Dimensional Geometry Review Project
6th Grade

Information: You are designing a miniature golf course. Each hole has a special design. Using graph paper or poster paper, create a blueprint design for a course that meets the following requirements.

Instructions:

1. You must have at least four holes on your course. You must clearly label the dimensions of each hole. Also, indicate the scale used for your blueprints.
2. On your blueprints, you only need to give a two-dimensional representation of each hole. Think of it as a bird's-eye view. **You do not need to consider three-dimensional figures.**
3. All four holes must be composite figures.
4. At least two holes must include trapezoids. The trapezoidal portion can be a part of a composite figure, or can be an obstacle.
5. At least two holes must include triangles. The triangular portion can be a part of a composite figure, or can be an obstacle.
6. Compute the area of each hole. Each hole must cover an area of at least 200 square feet. In your work, you must show the formulas used. You may ignore the area of the actual cup.
7. Each hole must have at least two "obstacles," such as wooden blocks, sand traps, water, or other potential difficulties for golfers. Give the dimensions of these obstacles and find their areas. You can be creative when designing your obstacles!
8. Subtract the area of each hole's obstacle from the hole's original area.
9. Then, combine each hole's remaining area to determine the total amount of turf you need to purchase in order to cover every hole.
10. At Home Depot, turf costs about $4.25 per square foot. How much will it cost you to cover your course in turf?
11. Type a report to explain your steps and rationale. Submit your typed report, blueprint drawings, and computational work by Thursday, May 4 or Friday, May 5.