Name: _____   **Surface Color:** _____

Task Master: _____   **Cynic:** _____   **Recorder:** _____

The Water Table

Working in small groups (3 or 4 people), solve as many of the problems below as possible. Try to resolve questions within the group before asking for help. Each group member should then write up solutions in their own words; please do not use this sheet for that purpose, but **please turn in this sheet as well.** *Show your work! Explain why your answers work.*

On your Marks: The county is revising their estimates of drill depths for new water wells. Their new guidelines need to guarantee the maximum and minimum drilling depths needed to reach the water table. You have been hired to develop the process to guarantee the depths are accurate. Your surface represents the depth needed to reach the water table (1 vertical inch is 100 ft) for the $100mi$ by $100mi$ county.

Get Set: Develop a method for finding the maximum and minimum values of the surface, if you only had the equation. Write your plan here:

Go: Evaluate the method of another group. Erase your surface, and mark every point found by their method for your surface. Is it missing any important locations?

Challenge: Can you develop a method based only on contour maps?