

**On your Mark:** You work for Granite Falls, a town which needs to move a playground due to harmful levels of lead (Pb) in the ground. The surface's height represents the concentration of lead (in  $\frac{\text{g}}{\text{m}^2}$ ) in the topsoil at every location in Granite Falls. Lead levels range from  $0.5\frac{\text{g}}{\text{m}^2}$  to  $6\frac{\text{g}}{\text{m}^2}$ .

1. The park is currently located at the red star. Mark all points on the surface with the same concentration of lead as the park.
2. Mark all points with lead concentrations  $1\frac{\text{g}}{\text{m}^2}$  higher and  $1\frac{\text{g}}{\text{m}^2}$  lower than at the park.
3. Could these curves intersect? Why or why not?
4. Sketch the curves by projecting them down onto a sheet of paper. Give appropriate labels.

**Get Set:** Granite Falls is a  $10\text{ km} \times 10\text{ km}$  town in the  $15.5\text{ km} \times 21.5\text{ km}$  Rock County.

1. The state records office has mixed up its county maps. Find the map showing the concentration of lead everywhere in Rock County.
2. Determine where the town is located in the county and place it there.
3. Explain how you know you found the right location.