**Designing a Fence**

You and your group members are designing a school garden. The principal has provided a 100ft2 plot of land, which measures 10 feet on each side. The grid below represents the plot of land; each unit represents 1 foot.



You and your group need to build a fence to protect your garden from pests. The only guidelines are that

* Your garden must have *at least* 4 sides; and
* Your garden must be closed on all sides.

With your group, determine what kind of fence you and your classmates will build. Use the grid provided above to sketch your group’s fence. Then, discuss and answer the following:

1. How many feet of fencing will you need to build your fence?
2. Find the area enclosed by your fence using two different methods. Describe the methods used and why they result in the same area.
3. What are the advantages and disadvantages of each method?