

Dog Yard Dilemma

Part One

You are a musher as well as the owner of a kennel. You have been lucky enough to gain a fencing company as a sponsor. Instead of staking your dogs to their houses, you wish to build pens or runs for your dogs so you can promote your sponsor's product.

The company says they will provide you with 100 feet of fencing per dog.

Experiment to discover all of the ways you can use 100 feet of fencing to build a run for one of your dogs. Use the chart below to document your experimentation.

Shape of Fence (Sketch with Dimensions)	Perimeter of Fence	Area of Fence

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Part Two

Yesterday you experimented with the dimensions of a dog run. Given 100 feet of fencing per dog, what is the largest area of space you could provide for the dog? Draw a diagram and explain your response in words.

Today's challenge:

1. At your kennel you have a total of 12 dogs. If each dog is provided with the same area to run in, what is the least amount of fencing material you could use to build all the pens? Using the graph paper, draw a diagram of your dog yard and label all of the measurements for each dog run. In the space below, record the total amount of fencing you will need and explain how you arrived at your answer.

2. With your leftover fencing, create two larger rectangular puppy pens in your kennel. The puppy pens should be adjacent to each other.

a. How much fencing did you use for the puppy pens? _____

b. Find the area of the combined rectangles. _____

Bonus: If you STILL have fencing left over.... You could add other things to your dog yard plan. Some mushers have separate runs for dogs who are ill or injured or need extra attention. Some have runs for retired dogs. What would you add to your dog yard? Just make sure that you don't go over your allotment of fencing from your sponsor!