A.

My pet is a two year old cat; it doesn’t require very much space outside since it lives primarily indoors. A fenced in area of 240 square feet would be sufficiently large.

The shape of the fence will be a rectangle that the length is to be four feet less than twice the width or:



Now, to find the dimensions of the fence combine the above formula with the area formula:



Now set this equal to 240 square feet and solve using the quadratic formula:



Since the width of the fence cannot be negative it must be 12 feet. Now to find the length:



The fence will be 20 feet by 12 feet.

Now to find the amount of fencing needed the perimeter will be found:



The fence will require 64 feet of fencing to build.

The fence will be a rectangular shape with a length of 20 feet and a width of 12 feet. The total length of fencing needed is 64 feet. The enclosed area will be 240 square feet which should be sufficient for a cat.