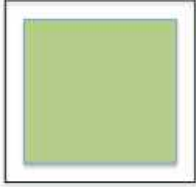


SQUARE FENCE

A fence is built around a square field. Suppose another fence is built exactly one metre longer so the path between the two fences is the same width along the edges of the field.



1. How wide would this path be?
2. Would a mouse be able to run along this path?
3. Could a farmer drive a herd of cows along the path between the fences?
4. Suppose you were the farmer and you wanted to make the path a certain width how would you work out how much fencing to buy?



Help

Draw a square. Cut very narrow strips of scrap card and make a fence around the square field that you have drawn. Then to make a longer square fence with a path around the field. Think about where the extra fence goes to make the longer fence, and how this is connected to the width of the path.

Next

Try the 'Not-so-Square Fence' <https://aiminghigh.aimssec.ac.za/grades-9-to-10-not-so-square-fence/> on the AIMING HIGHER Teacher Network. This is essentially the same problem but the path is a constant width everywhere and so the fence has to be rounded at the corners of the field.