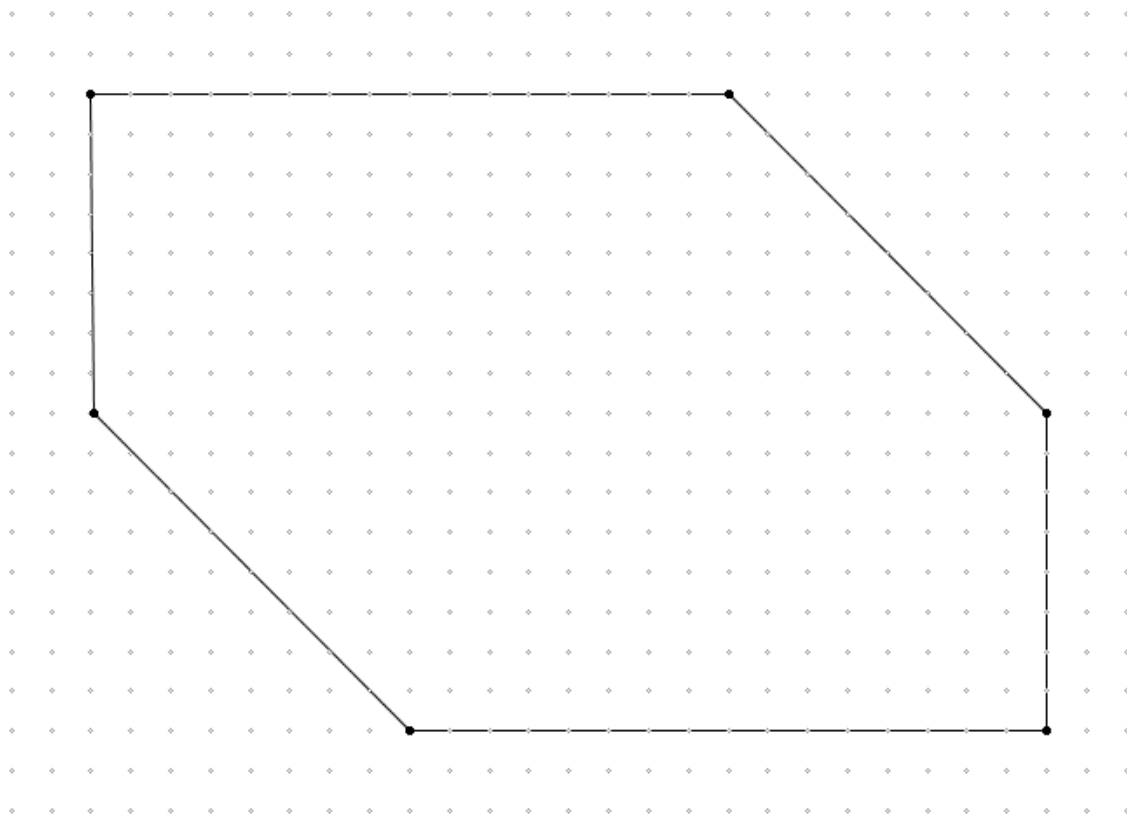


Problem 1

Divide the figure

The figure below will be divided into four exactly equal (congruent) parts. Show how you are doing and why the parts are congruent (Exactly the same). (The pattern behind is composed of small squares.)



Problem 2

Animal shop

You should open an animal shop.

You have 3000 kroner and 200 cages. It must be bought in hamsters, guinea pigs and white mice. All cages should be used (one animal in each cage) and all the money is spent.

A hamster costs 30 kr.

A guinea costs 100 kr.

A small mouse costs 5 kr.

How many can you buy of each variety? Find all possibilities.

Task 3

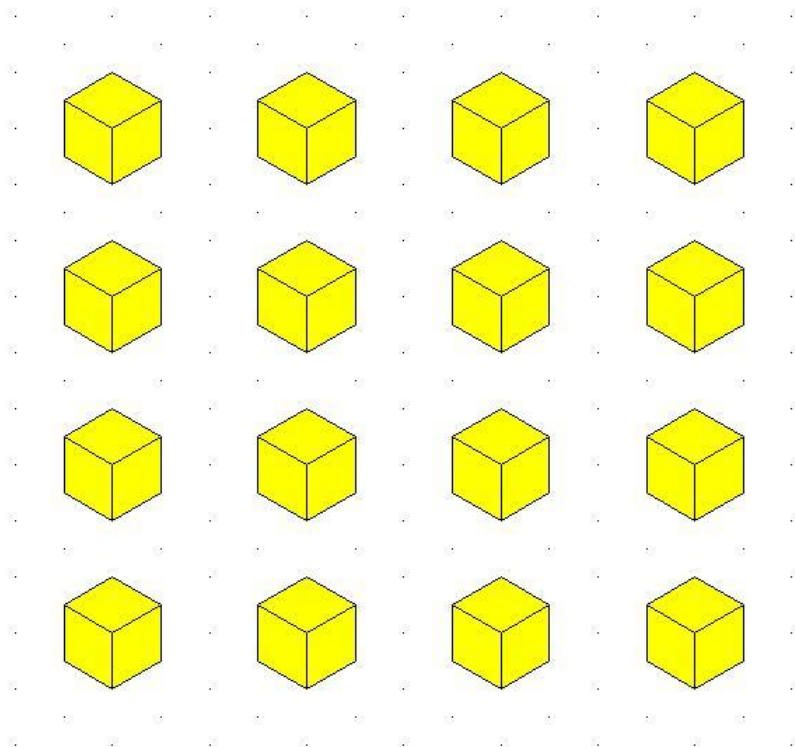
Red and blue cubes

You have many yellow cubes and two cups of paint, one red and one blue. Each surface on each cube must be painted either red or blue.

How many cubes, which look different, can you do with these two colors?

You have been awarded a monochrome cube that can help you to keep track of how cubes can be painted.

Explain how the cubes will look like.



Task 4**Maximum product**

Use each digit exactly once.

You shall make two five-digit number so that the product is as large as possible.

0 1 2 3 4 5 6 7 8 9

Task 5

From cross to square

Cut along two straight lines of the cross so that the formation of four bits can be assembled into a square

