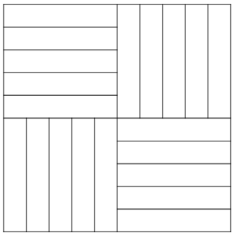
Task 1

Color Puzzle

Equipment:

- Five colored pencils
- Two work sheets

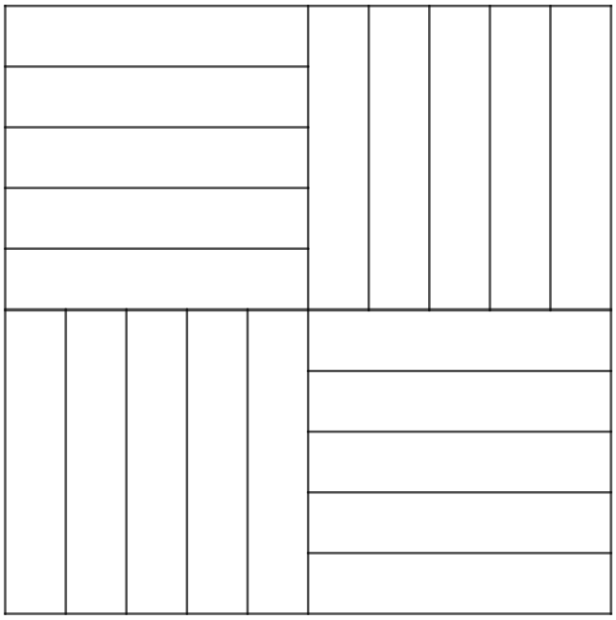


Color the figure.

The challenge is to

- do it in such a way that regions sharing a common boundary (other than a single point) do not share the same color
- use as few colors as possible

Answer Country:

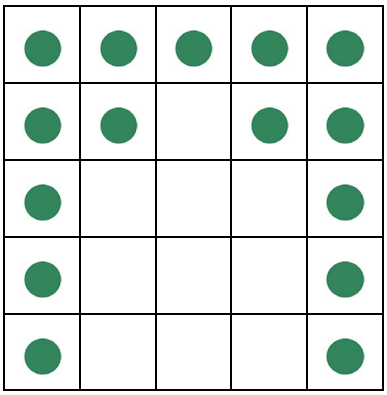


Task 2

Move the Pieces

Equipment:

- A 5 x 5 grid
- 15 pieces
- Answer sheet
- Work sheets



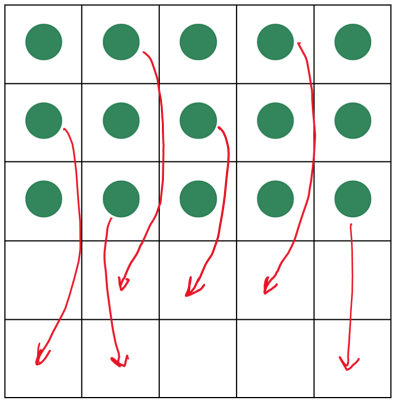
In the diagram, any ● may be moved to any unoccupied space.

What is the smallest number of ●'s that must be moved so that each row and each column contain three ●'s?

Use arrows to show the moves at the answer sheet.

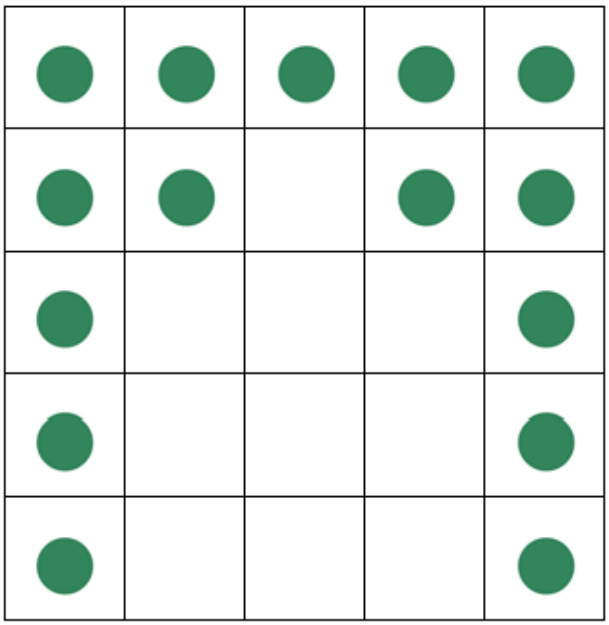
Example

If we start with five ●'s in in tree lines, the solution can be like this:



Task 2

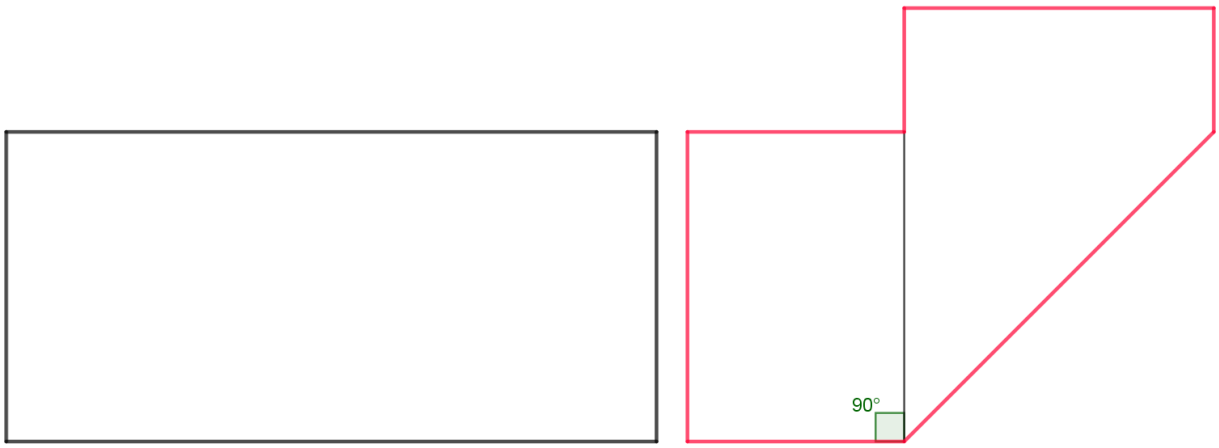
Answer Country:



Task 3

Area

Equipment: A4 paper to fold



A rectangular piece of paper measures 42 cm by 20 cm.
It is folded so that a right angle is formed between the two segments of the original bottom edge, as shown.

What is the area of the new figure, inside the red lines?

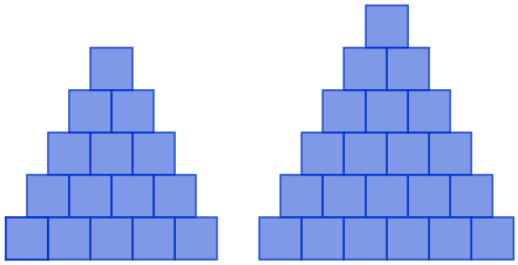
Task 3

Answer Country:

Task 4

Stacs of blocks

Equipment: Square Counters



Clara knocks over the two stacks of blocks shown in the diagram. She then uses the blocks to build a similar stack whose top layer has one block, and each layer below has one more block than the layer above it.

a) If she builds the largest possible stack, how many blocks will be left over?

The diagram shows stacks number 5 and 6.

b) How can we easy find the number of blocks in two random consecutive stacks?

Answer Country:

Task 5

Pair Sums

Five numbers are added together in pairs to produce the following answers:

0 2 4 6 8 9 11 13 15

What are the five numbers? Explain your reasoning.

Answer Country: