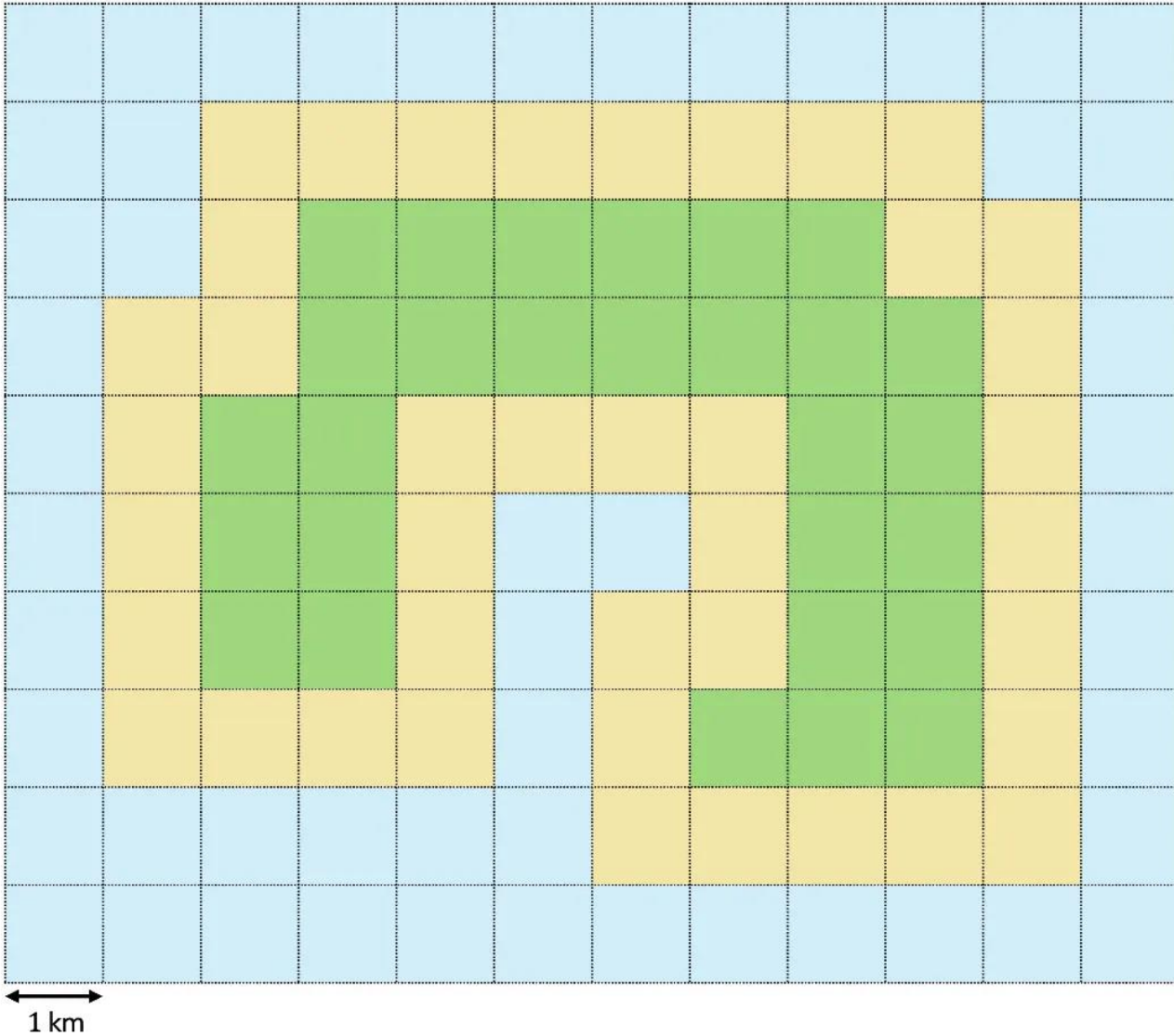


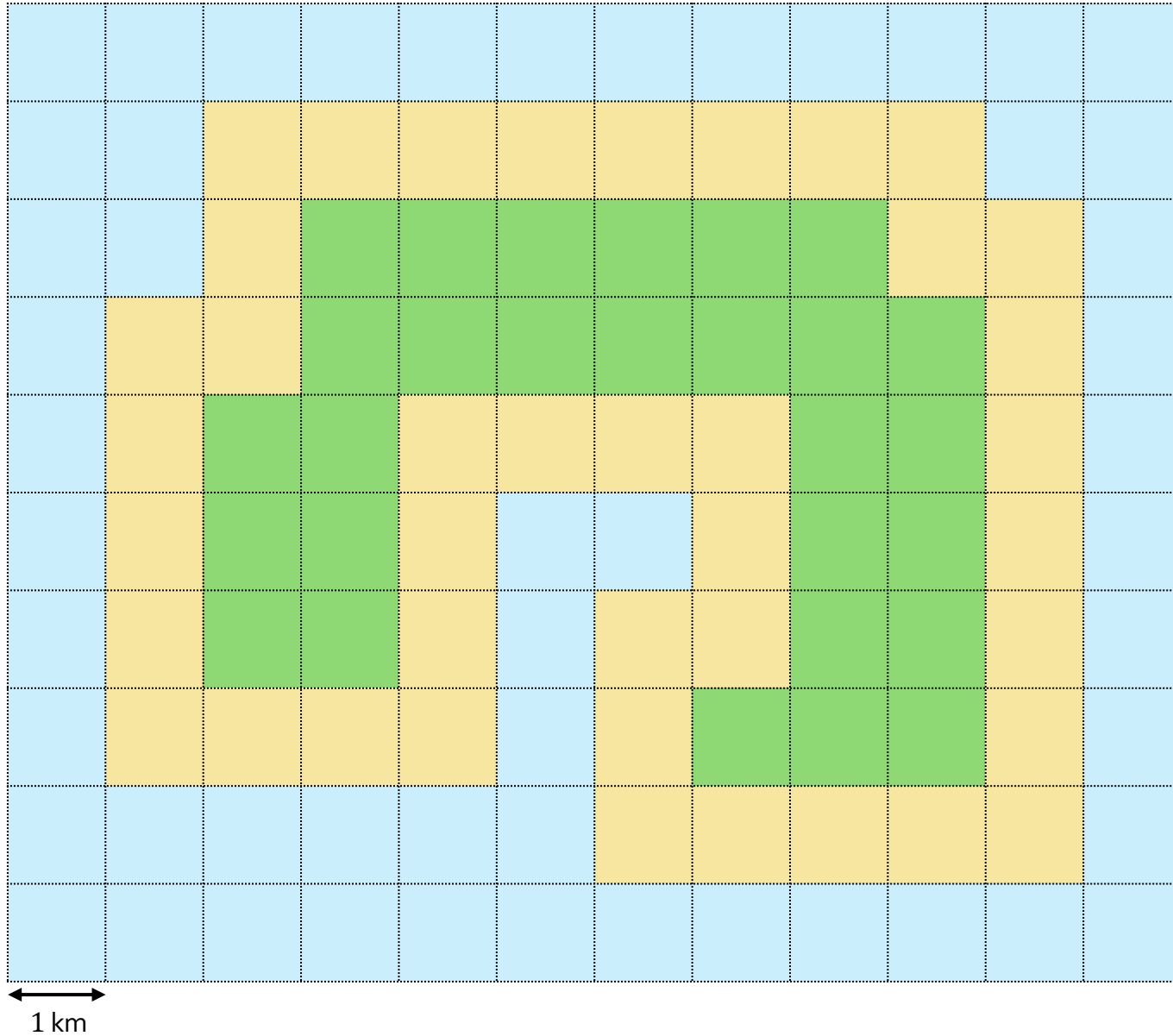
ISLANDS

Islands are made up of pieces of land completely surrounded by beaches.

This island has 28 km^2 of land, and 40 km^2 of beach.

- What is the smallest possible island that has more land than beach?
- Can you make an island with the same amount of land as beach?
- Is the amount of beach always more than the perimeter of the land?





ISLANDS

Islands are made up of pieces of land completely surrounded by beaches.

What questions could you ask about islands?

Draw:

- An example of an island.
- Something that is almost an Island.
- Something that is definitely **not** an island.

1 – Small Island

Draw the smallest possible island that has more land than beach.

Draw the largest possible island that has more beach than land.

3 – Balanced Island

Draw an island with the same amount of land as beach.

Draw an island with the same amount of land as beach.

4 – Perimeter?

Draw an island where the amount of beach is less than the perimeter of the land.

Imagine you have an n by n square island.

Write an expression for the:

- Amount of land
- Amount of beach
- Perimeter of land
- Fraction of the total island that is land

6 – Rectangular Islands

Imagine you have an m by n rectangular island.

Write an expression for the:

- Amount of land
- Amount of beach
- Perimeter of land
- Fraction of the total island that is land

7 – Rectangular Proof

Find two different rectangular islands that have the same amount of land as beach.
Prove that these are the only two possible islands.

Ask a mathematical question about islands.
Answer it.