

What's a fair share of Square Island?

Investigation Brief

Imagine you and five other 'geometric relatives' inherit a perfectly square island from your Great Grandma. Each side of the island is 9km, but everyone wants the same amount of coastline and the same area of land.

How will you subdivide the island so everyone gets a fair share?

Develop two plans to take to the family meeting with proof that each section has the same area and coastline.

Resources

- paper
- pencil
- calculator
- minecraft (if you want to make a digital representation)

Prompts and Suggestions

What is the formula for finding the area of triangles?

Make a sketch with dimensions to present your plans.

If you are not sure how to start think about this: Because six people are sharing the whole island, that means that three people are sharing half the island.

Extension

Can you develop a general rule for the family for any future subdivisions of rectangular islands which will be fair no matter how many people inherit the property?

