QUARTERS OF SHAPES AND LENGTHS.

INVESTIGATIONS OVERVIEW PAGE
THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING.
INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

- In pairs, children have paper squares, circles and strips. They divide them into quarters, by dividing in half first, then dividing their half in half. They check for equality by superimposing and looking for gaps and overlaps, record their quarters. They explain why they are called quarters – because a quarter is a quarter as big as 1 shape. They explain that a quarter is half as big as a half. Reflection: What is a quarter?

- In pairs, children are asked to show a quarter in as many different ways as they can. For example, they may have the same shape divided into quarters in different ways. They check if their quarters of the same shape are equal by cutting up one quarter and pasting it on the other quarter. Reflection: What is a quarter?

- In pairs, children have shapes of different sizes and shapes. They divide them in quarter. They compare the areas of the shapes and the areas of the quarters, explaining that a quarter of a larger shape is larger than a quarter of a smaller shape. Reflection: What is a quarter?

- In pairs, children have a shape to pretend is a cake. They decorate quarter of the cake with smarties and quarter of the cake with choc buds. Reflection: What is a quarter?

- In pairs, children cut some shapes into 2 parts that are not quarters. They explain why the parts are not quarters because they are not equal. Reflection: What is a quarter?

Quarters of Shapes and Lengths

Have some paper squares, circles or strips.

Divide them into quarters, by dividing in half first, then dividing your half in half.

Check for equality by superimposing and looking for gaps and overlaps.

Record your quarters.

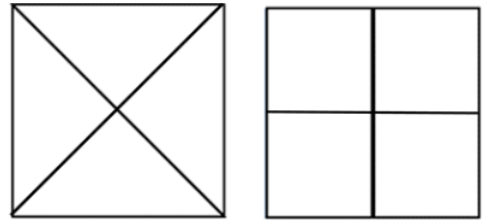Why are quarters called quarters? What is a quarter, a quarter as big as?

What fraction of a half is a quarter?

Reflection: What is a quarter?

Quarters of Shapes and Lengths

Have many of the same shape.

Divide the shape into quarters in different ways, for example,

Check if your quarters of the same shape are equal by cutting up one quarter and pasting it on the other quarter.

Reflection: What is a quarter?

Quarters of Shapes and Lengths

Have shapes of different sizes.

Divide them in quarters.

Compare the areas of the shapes and the areas of the quarters.

Are all of the shapes and quarters the same size?

Which quarters have a larger area? Why?

Which quarters have a smaller area? Why?

Reflection: What is a quarter?

Quarters of Shapes and Lengths

Have a shape to pretend is a cake.

Decorate quarter of the cake with smarties, quarter of the cake with choc buds, quarter of the cake with sprinkles and leave quarter of the cake plain.

Reflection: What is a quarter?

Quarters of Shapes and Lengths

Cut some shapes into 4 parts that are not quarters.

Why are the parts not quarters?

Reflection: What is a quarter?