Bounding Around

*All measurements are given to 1 s.f. in this investigation!*

What’s the Upper Bound of the length of this rectangle?

5cm

3cm

What about the Lower Bound of the length?

What are the Lower and Upper Bounds of the width?

What’s the Upper Bound of the Area?

What about the Lower Bound?

What’s the difference between them?

Invent 2 more rectangles of your own.

Investigate the difference between the Lower and Upper Bounds of the Area.

Can you prove your conclusion?

Investigate the difference between the Lower and Upper Bounds of the Areas of rectangle with dimensions 50 cm x 30 cm.

What do you notice?

Predict the difference between the Lower and Upper Bounds of the Areas of rectangles with dimensions:

50 cm x 3 cm

5000 cm x 300 cm

0.5 cm x 0.03 cm.

Test whether you were right or wrong.

The Challenge!

Can you write a formula for the difference between the Lower and Upper Bounds of the Area of a rectangle with dimensions:

a x 10p cm x b x 10q cm?