Problem of the Week
Problem B
“B” There or “B” Square!

A and B are two squares such that the perimeter of Square A is a multiple of the perimeter of Square B by a whole number. We wish to explore how the areas of the two squares are related.

a) If the perimeter of Square A is 3 times that of Square B, what is the ratio of the area of Square B to the area of Square A? Illustrate your answer with a diagram on graph paper. Express your answer as both a ratio and a fraction.

b) What if the perimeter of Square A is 4 times that of B? 5 times that of B?

c) Explain how you would figure out the area ratio if the perimeter of Square A is 10 times that of Square B.

**Strands**: Measurement, Number Sense and Numeration