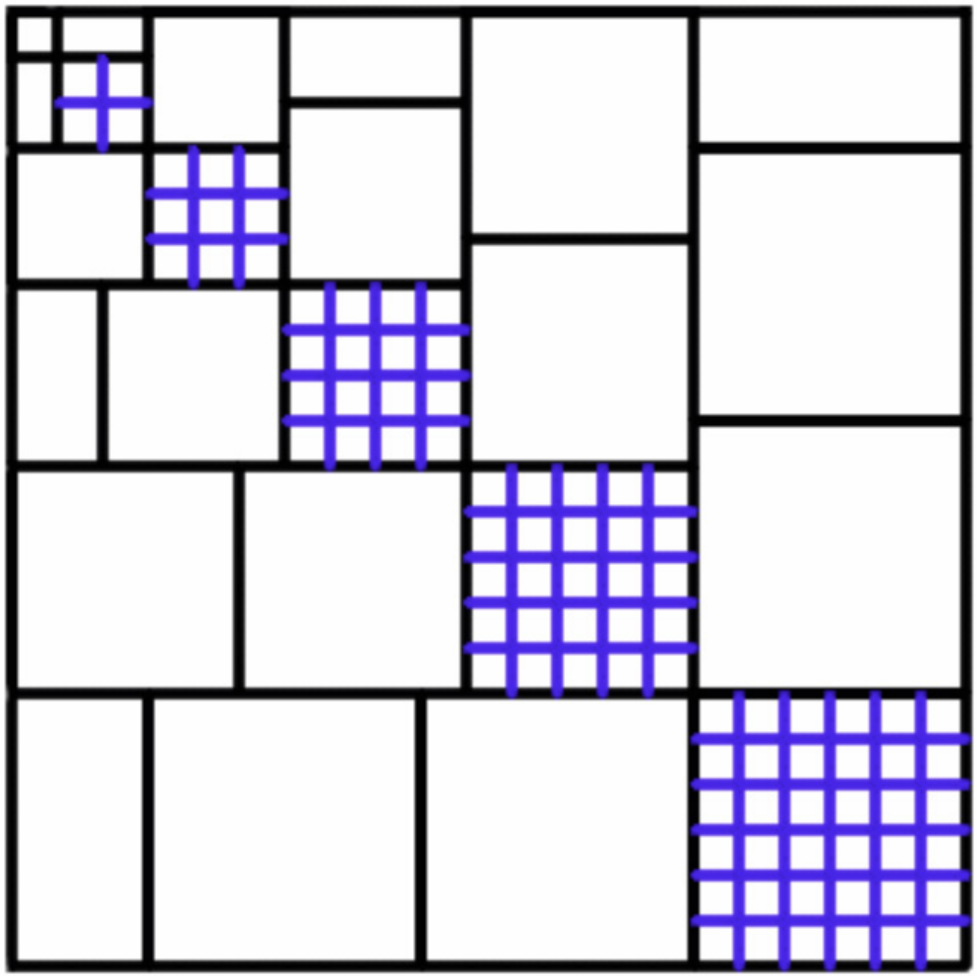
Picture Story



How does this picture illustrate the following:

$$1^3 + 2^3 + 3^3 + \ldots + 6^3 = (1 + 2 + 3 + \ldots + 6)^2$$

Could you draw a similar picture to represent the sum of the first seven cube numbers?

What about other sums of cubes?

Suggest an expression for the sum of the first n cube numbers. Can you prove that your expression works, using diagrams and explanations? Send us your thoughts!

Adapted from http://nrich.maths.org/325